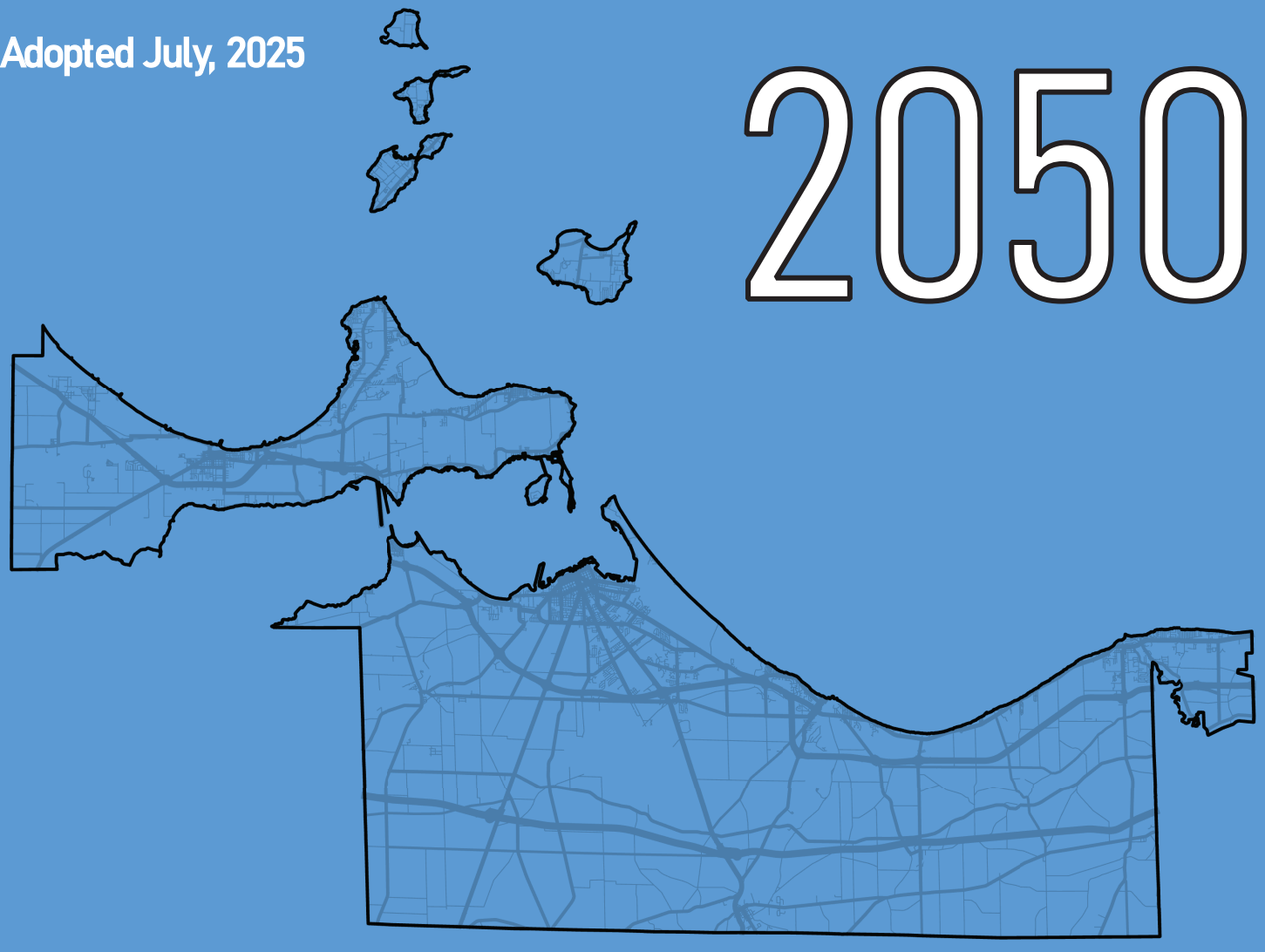
Erie Regional Planning Commission
Metropolitan Planning Organization

2025-2050 Long Range Transportation Plan

Adopted July, 2025

2050



RESOLUTION NUMBER 2025-09 OF THE METROPOLITAN PLANNING ORGANIZATION POLICY COMMITTEE OF THE ERIE REGIONAL PLANNING COMMISSION

APPROVING THE 2050 LONG RANGE TRANSPORTATION PLAN

WHEREAS, Fixing America's Surface Transportation Act (FAST Act) required that all transportation programs in urban areas of more than 50,000 population be prepared by the metropolitan planning organization (MPO) based on a continuing, comprehensive, transportation planning process carried on cooperatively between state and local communities; and

WHEREAS, the MPO refers to a forum for cooperative transportation decision making for the metropolitan planning area; and

WHEREAS, Erie Regional Planning in conjunction with the local and state representation has prepared a 2050 Long Range Transportation Plan Update as part of the transportation planning process; and

WHEREAS, Erie Regional Planning has performed a public involvement process consistent with the MPO Public Involvement Policy; and

WHEREAS, the public involvement included public meetings, online material, stakeholder surveys, public surveys, website postings, newspaper advertisements, and presentations of the transportation plan in various regular MPO committee meetings; and

WHEREAS, Erie Regional Planning has seriously considered the many comments received from individuals, organizations and committee membership in developing the recommendations of this plan; and

WHEREAS, the projects and programs in the 2050 Long Range Transportation Plan Update are fiscally constrained; and

WHEREAS, This Committee is the Metropolitan Planning Organization (MPO) for Erie County, the eastern portion of Ottawa County, and the City of Vermillion portion of Lorain County; and

WHEREAS, Lorain County is part of nonattainment areas for ozone and fine particulates; and

WHEREAS, the ERPC 2050 Long Range Transportation Plan Update must address transportation conformity for the Lorain County portion of the City of Vermilion; and

WHEREAS, the requisite Transportation Plan and TIP conformity analyses for this geography are conducted by the Northeast Ohio Areawide Coordinating Agency (NOACA) and the most recent US DOT conformity determination for the Cleveland-Akron air quality area for 2008 and 2015 ozone and 2006 and 2012 PM 2.5 with federal

approval on June 30th, 2025 as determined by inter-agency consultation first initiated on November 13, 2024; and

WHEREAS, the ERPC 2050 Transportation Plan Update recommendations do not include new capacity additions within the Lorain County portion of the City of Vermilion and, therefore, the update remains consistent with the previous conformity determination; and

WHEREAS, the 2050 Long Range Transportation Plan has been submitted to and reviewed by the Technical Advisory Committee and the Policy Committee:

NOW THEREFORE BE IT RESOLVED:

1. That this Policy Committee hereby approves the 2050 Long Range Transportation Plan and submittal of the plan to the appropriate agencies; and

2. That this Policy Committee hereby determines that the ERPC 2050 Transportation Plan Update recommendations for the Lorain County portion of the City of Vermillion conform to the Ohio State Implementation Plan.

3. That this Committee authorizes the Erie Regional Planning Commission Director and staff to take any and all actions that in their judgment is necessary to carry out the purposes of this Resolution and to provide copies of this Resolution to the appropriate agencies as evidence of action by the Metropolitan Planning Organization.

Eric Dodrill, 2025 Chairperson
Erie Metropolitan Planning Organization Policy Committee
Erie Regional Planning Commission

July 24, 2025
Date

TABLE OF CONTENTS 2050 Long Range Transportation Plan

Chapter 1. Introduction

1.1 Transportation Planning History

The Federal-Aid Highway Act of 1962 created the requirement for urban transportation planning, largely in response to the construction of the Interstate Highway System and the planning of routes through and around urban areas. This was the first legislative mandate requiring planning as a condition to receiving federal transportation funds. The Act required that transportation projects in urbanized areas of 50,000 or more in population be based on a continuing, comprehensive transportation planning process undertaken cooperatively by the states and local governments also known as the "3C" (continuing, comprehensive and cooperative) planning process.

Two features of the act were significant with respect to the development of Metropolitan Planning Organizations (MPOs). First, it called for a planning process in urban areas on a regional rather than a city level, and second it called for the process to be carried out cooperatively by the states and local communities. At the time, qualified planning agencies were lacking in many urban areas. Therefore, the Bureau of Public Roads (predecessor to the Federal Highway Administration) required the creation of entities that would be capable of carrying out the required transportation planning process. Hence MPOs quickly came into being due to the rapid growth of the highway system and the federal financing of the planning process.

Later transportation legislation, the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA), and its successor, the Transportation Equity Act for the 21st Century (TEA-21), strengthened the role of the MPOs, required stakeholder involvement, encouraged a multi-modal approach to transportation planning and identified specific "planning factors". In 2005, the President signed into law the Safe Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) with guaranteed funding for highways, highway safety and public transportation representing the largest surface transportation investment in the Nation's history at the time. SAFETEA-LU featured a strong fundamental core formula program with emphasis on targeted investment. In 2012, the President signed a new transportation bill replacing SAFETEA-LU with Moving Ahead for Progress in the 21st Century, or MAP-21. A new requirement of MAP-21was that it mandated MPO's and state transportation departments to create performance measures in its planning programs. MAP-21 also impacted the funding category of Transportation Enhancement converting it to Transportation Alternative dollars.

In 2015, President Obama replaced MAP-21 with Fixing America's Surface Transportation Act (FAST Act). Under this act, performance measures are still followed as in MAP-21 but includes two new previsions including penalties for state's freight performance measures as well as providing shorten timeframes for States and MPOs to make progress towards meeting performance measure targets. Shortened project delivery is emphasized under the act.

In 2021, President Biden signed the Infrastructure Investment and Jobs Act (IIJA) into law. IIJA makes a once-in-a-generation investment in infrastructure and transportation, and includes $550 Billion in federal infrastructure investment. The provisions include new formula and discretionary highway programs, the largest federal investment in public transit, and largest federal investment in passenger rail since the creation of Amtrak.

All MPOs are required to produce three documents: 1.) A fiscally constrained Long-Range Transportation Plan to address projects, programs and policies for at least a twenty-year timeframe, 2.) A four-year Transportation Improvement Program (TIP) to identify highway, transit and non-motorized improvements (bike, pedestrian etc.) which receive federal funding and 3.) An annual comprehensive Unified Planning Work Program (UPWP) that determines the MPO's transportation planning activities annually.

1.2 What is a Long-Range Transportation Plan?

The LRTP was developed cooperatively by the Erie Regional Planning Commission (ERPC) along with local, state, federal and private stakeholders to identify short-, mid-, and long-range transportation goals (see Chapter Nine) for the planning area. Some of the identified projects have been designated for federal funding, some are illustrative and have no cost or designated funding associated with them and some simply list the type of funding they (the municipality) plans to pursue to complete a desired project. The financial capacity analysis (see Chapter Ten) is a tool used to illustrate jurisdictional ability to finance and comply with the federal LRTP mandate of fiscal constraint. Planning efforts are guided by federal requirements of the Infrastructure Investment and Jobs Act (IIJA), the Americans with Disabilities Act of 1990 (ADA), the 1964 Title VI Civil Rights Act, and the Clean Air Act Amendments of 1990 (CAAA).

The ERPC Long-Range Transportation Plan (LRTP) also provides tools and strategies for the area's jurisdictions to work cooperatively enabling them to provide a well-maintained, integrated and accessible transportation system that efficiently moves people and goods (freight). It covers a 25-year timeframe and addresses all modes of transportation including air, bicycle, pedestrian, rail, road, transit and waterborne. The goal of the plan is to offer fiscally constrained planning initiatives and policy directives to preserve the infrastructure and improve the effectiveness of the area's metropolitan transportation system through the year 2050.

Running concurrent with the development of the ERPC long-range plan update, the Ohio Department of Transportation (ODOT) has been updating of their statewide long-range multi-modal transportation plan, Access Ohio 2050 (AO 2050). Similar to ERPC's long-range plan, the purpose of the document is to guide, inform, and support transportation policies and investments. While ERPC's long-range plan identifies the most critical transportation investments that expand and improve its regional transportation system, AO 2050 does the same but for the entire statewide transportation system. Even though regional needs could vary some from statewide needs (due to differing regional profiles and constituent needs) there are many transportation priorities shared by both the state and ERPC. Aligned priorities identified as the same between AO 2050 and ERPC's long-range plan include improving safety, efficiency and reliability, improving modal linking, and preservation of the existing system. These aligned priorities demonstrate the compatibility between the statewide long-range plan and ERPC long-range plan and are utilized in the development of this plan's goals and objectives (see Chapter 2).

1.3 Metropolitan Planning Organization (MPO) Functions

The Erie Regional Planning Commission is the designated MPO for the Sandusky-Port Clinton urbanized area (see Figure 1-3.2) which is comprised of all of Erie County, the eastern half of Ottawa County beginning at Bay and Erie Township, and the incorporated areas of the City of Vermilion in Lorain County. The MPO's primary role is to provide guidance and leadership on transportation and land use planning issues in the Sandusky-Port Clinton metropolitan area. A key goal is to focus the area's limited

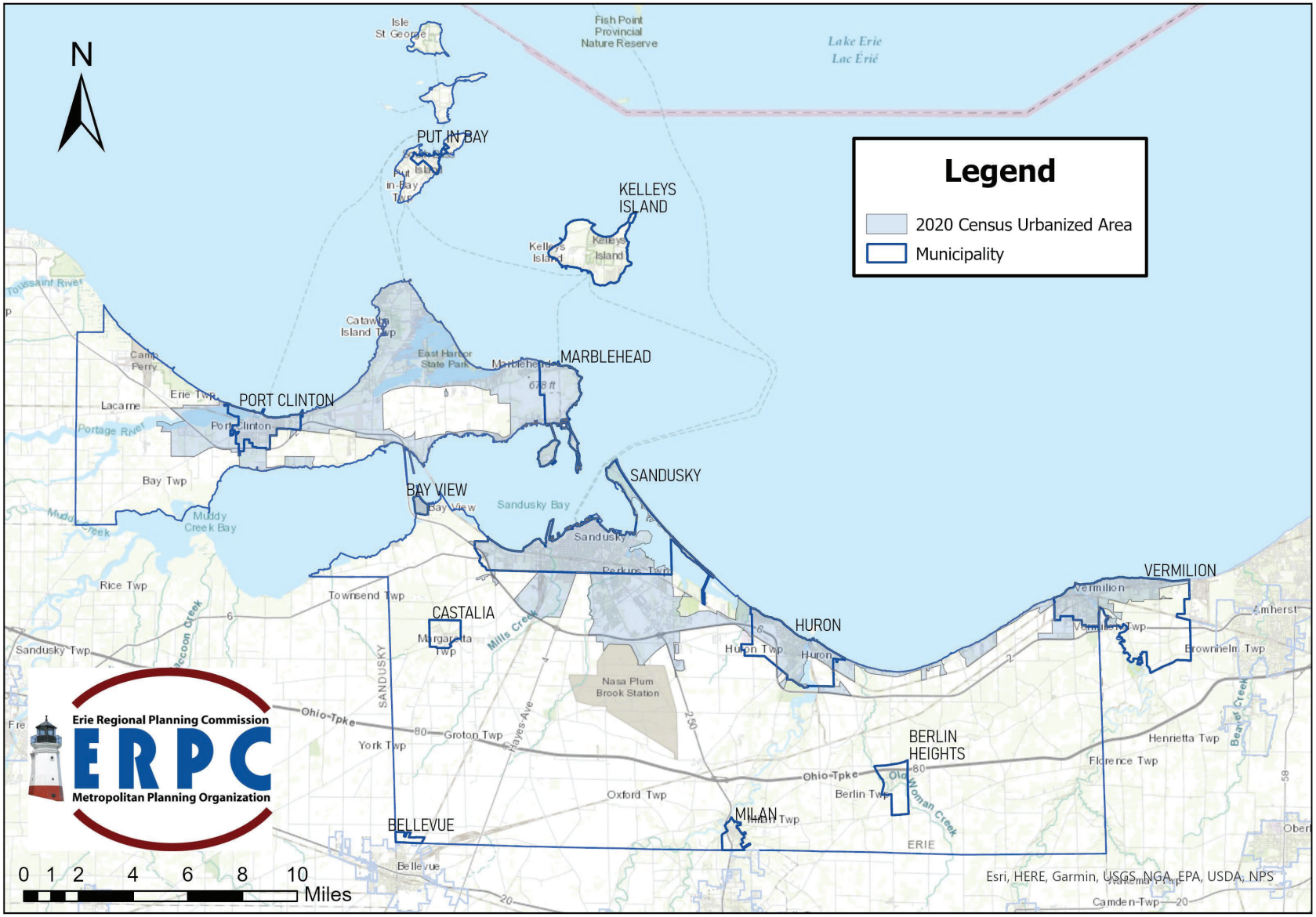
transportation funding on projects that yield the greatest benefit and integrate with the existing transportation system. In addition, emphasis is placed on a regional approach to ensure that all government entities in the planning area have equal access to federal surface transportation funding. The MPO also conducts studies, develops plans/programs and submits projects for funding in the metropolitan area.

Role and Structure: In 2003, ODOT sent the required correspondence to formally establish the MPO in Erie County. The letter stated that the MPO would handle all federal transportation funds flowing through the MPO's planning area. A Policy Committee (more on this below) was established and designated to serve as the MPO while ERPC was designated to serve as administrative agents. In other words, ERPC would provide staff for the daily MPO operation and conduct the area's urban transportation planning process with the direction and guidance of the Policy Committee. During the 2010 Census, the MPO area was revealed to have a population of just under 50,000 people in the Sandusky urbanized area. Due to the support on the local, state and federal levels ERPC still maintains its designation as a MPO. Following the 2020 Census, the Sandusky urbanized area was expanded to include the City of Port Clinton in Ottawa County, and became the Sandusky-Port Clinton urbanized area. The MPO worked with Ottawa County officials to expand the metropolitan planning area, and in 2024 adopted an updated Prospectus detailing the new planning area and Policy Committee of the ERPC MPO.

The ERPC MPO Policy Committee is made up of local officials, operators of major modes of transportation and the Ohio Department of Transportation (ODOT). The committee was strengthened by the formation of a Technical Advisory Committee (TAC) to aid in the project review and the selection process. The TAC consists of members who work locally within the transportation system (such as engineers and planners) and can provide technical guidance to the Policy Committee members upon request.

To ensure greater public outreach and comments as a component of MPO projects a Public Involvement Plan (PIP) was created in addition to a Citizens Advisory Committee (CAC). Additional subcommittees help engage and inform the TAC through public stakeholders, including the Bicycle & Pedestrian Advisory Committee and Freight Advisory Committee. More on public involvement is discussed in Chapter Three.

Figure 1-3.1: MPO Committees



Map prepared by Erie Regional Planning Commission, and is intended for illustrative purposes only. Erie County, Ohio assumes no responsibility or liabilities for any errors or omissions contained here in.

Figure 1-3.2: ERPC MPO Planning Area

ERPC MPO 2050 Long Range Transportation Plan

1.4 Review of Planning Literature

While updating the LRTP, projects from the entire planning area were reviewed and considered. To obtain this information staff reviewed numerous planning studies when feasible to complement public outreach efforts. Below is a comprehensive list of documents that were reviewed. Synopses of these studies are provided in Appendix G. The plans have been summarized in regard to their relationship to transportation. It should be noted that although some of the studies go back a number of years, the recommendations are still relevant and have been incorporated into the LRTP 2050 five-year update.

Table 1:4.1 Review of Previous Studies

Title and Year	Type	Prepared By
Erie County Comprehensive Development Plan, 1995	Land Use Plan	ERPC
Erie County Thoroughfare Plan Update, 1995	Transportation Plan	Poggemeyer Design Group, Inc.
City of Vermilion Comprehensive Plan, 2000	Land Use Plan	ERPC
A Transportation and Land Use Analysis of the SR 250 Corridor, 2005	Corridor Study	Mannik and Smith Group, Inc. and Stilson Consulting Group
City of Huron Comprehensive Plan 2020, 2012	Land Use Plan	City Architecture
Perkins Township Comprehensive Plan, 2020	Land Use Plan	ERPC
Vermilion Township Comprehensive Plan, 2007	Land Use Plan	ERPC
Comprehensive Economic Development Study, 2008	Economic Development	ERPC
Sidewalk Inventory Study, 2013	Non-motorized Transportation	ERPC
Erie County Freight Plan, 2023, 2013	Transportation Study	ERPC/TranSystems/GDP Group
SR 60 Corridor Study, 2012	Corridor Study	Poggemeyer Design and the EDGE Group
Safe Routes to School Sandusky, 2023	School Travel Plan	Sandusky, ECHD, ODOT
Ohio Statewide Freight Plan, 2022	Statewide Transportation Plan	ODOT
Access Ohio 2045, Access Ohio 2050 (Draft)	Statewide Transportation Plan	ODOT
Walk.Bike.Ohio, 2021	Statewide Transportation Plan	ODOT
Ohio Maritime Plan (Draft, 2024)	Statewide Transportation Plan	ODOT
Erie County Hazard Mitigation Plan, 2014	Safety Plan	Erie County Emergency Management, URS
The Economic Impact of Tourism in Erie County, Ohio 2017	Economic Plan	Tourism Economics
Safe Routes to School Huron, 2015	School Travel Plan	ERPC

Safe Routes to School Perkins Township, 2015	School Travel Plan	ERPC
Long-Range Transportation Plan 2045	Long-Range Transportation Plan	ERPC
US 4 Safety Plan, 2015	Corridor Study	Poggemeyer Design Group
Strategic Plan City of Sandusky, 2016	Strategic Plan	City Architecture
Safe Routes to School Edison Schools, 2015	School Travel Plan	ERPC
Safe Routes to School Vermilion, 2016	School Travel Plan	ERPC
SR 4 Safety Study, 2017	Corridor Study	ODOT
Sandusky Bay Pathway, 2018	Pathway Plan	Environmental Design Group
US 6 Corridor Plan, 2019	Corridor Study	ODOT, TranSystems
Regional Road Safety Plan, 2020	Safety Study	ODOT, WSP Consultants
Erie County Bicycle and Pedestrian Plan, 2020	Non-motorized Transportation	ERPC
NEVI Infrastructure Deployment Plan	Statewide Transportation Plan	DriveOhio, ODOT
Sandusky 2018 Bicentennial Vision	Land Use Plan	City Architecture
Downtown Sandusky Master Plan	Land Use Plan	MKSK
Ottawa County Active Transportation Plan	Non-motorized Transportation	Poggemeyer Design Group

Chapter 2. Plan Goals and Objectives

2.1 Overview

The following plan goals and objectives will help shape transportation development in the ERPC MPO region through the Year 2050 and will aid decision makers by providing policy direction. Goals are defined as the desired end condition reflecting the concerns and needs in better managing the transportation system. These goals will strengthen interrelationships between transportation modes and will achieve a more integrated network. Objectives are broad action statements that will aid in accomplishing targeted goals. Together these goals and objectives provide a policy platform for the 2050 Long-Range Plan.

The general goals for the Long-Range Plan Update are set forth in the federal legislation for funding transportation improvements. This legislation governs the planning, funding and implementation of transportation improvements throughout the County. The latest version is titled Infrastructure Investments and Jobs Act (IIJA) and was signed into law November 15, 2021. It builds on previous federal transportation legislation and is designed to deal with the transportation challenges in today's environment. It places a strengthens the emphasis on areas related to safety, infrastructure condition, congestion reduction, system reliability, freight movement and economic vitality, environmental sustainability and reduced project delivery times. The IIJA also has incorporated program evaluation requirements through the use of national performance-based planning. Performance-based planning utilizes performance measures and targets where a performance measure is a metric used to assess progress toward meeting an objective and a target is a specific level of performance that is desired to be achieved within a certain timeframe. The goals and objectives for this update of the 2050 Transportation Plan were developed with addressing FAST Act requirements in mind.

2.2 Goals and Objectives

ERPC's first Long-Range Transportation Plan was adopted in 2005 with five year updates conducted in 2010, 2015, and 2020. The 2005 and the 2010 approved plans were passed under previous transportation bills. Planning factors for the 2015 and 2020 plan updates were developed under MAP-21. For the 2025 plan update, current federal regulation requires ten planning factors be considered:

(1) Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency;
(2) Increase the safety of the transportation system for motorized and non-motorized users;
(3) Increase the security of the transportation system for motorized and non-motorized users;
(4) Increase accessibility and mobility of people and freight;
(5) Protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns;
(6) Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight;
(7) Promote efficient system management and operation;

(8) Emphasize the preservation of the existing transportation system;
(9) Improve the resiliency and reliability of the transportation system and reduce or mitigate storm water impacts of surface transportation; and
(10) Enhance travel and tourism.

Also, ODOT's Access Ohio 2045 (AO 45) long-range transportation plan was considered to ensure compatibility of transportation priorities. As many MPO planning efforts coincide with statewide system level considerations, ERPC collaborated with ODOT to ensure that its long-range transportation plan aligned with transportation priorities identified in AO 2045. Critical topics identified between both plans included system preservation, safety, freight, non-motorized, transit, and system efficiency and were also used to guide the development of plan goals and objectives. During ODOT's plan development, ERPC acted as a conduit for local government and public/stakeholder involvement. ERPC attended various ODOT presentations/public meetings, completed plan update draft reviews and prepared comments for inclusion into AO 2045. Additionally, implementation of performance measure based planning and the importance of establishing good working relationships contributed to shared regional and statewide transportation goals.

As a component of performance measure based planning, under the FAST Act, ERPC must also ensure the Long-Range Transportation Plan incorporates a system performance report. The system performance report is included as an appendix in this document. The report strives to provide an overview of the impact of transportation investment funding upon the region's transportation network. Key performance measures, as prescribed in the FAST Act, are listed and reported out in the system performance report.

All of the above factors were utilized in the 2050 plan as a base, the goals and objectives were developed through an internal process involving public input, MPO Policy and Technical Committee oversight, a review of existing conditions data, an identification of transportation system deficiencies and a review of state and regional goals and objectives. The following Goals and Objectives will also assist with the evaluation of potential transportation improvements throughout the ERPC MPO region.

Goal	Goal Statement	Objectives
Safety	In the ERPC's transportation network achieve a reduction in fatalities & serious roadway injuries for motorized and non-motorized users	Encourage clear signage on roadways throughout the MPO area Improve hazardous intersections Support projects that increase safety Use transportation project selection criteria to accentuate projects that encourage safety Promote educational safety programs
Goal	**Goal Statement**	**Objectives**
Infrastructure Condition	Maintain the existing transportation infrastructure assets in a state of good repair	Use transportation project selection criteria to accentuate system preservation projects Support efforts for the proper maintenance of the existing transportation system & the use of non-motorized methods of transportation to reduce stress on the current system
Goal	**Goal Statement**	**Objectives**
System Reliability	Improve the efficiency of the local surface transportation system	Use transportation project selection criteria to accentuate projects that improve the efficiency of the local transportation system Reduce travel time & delays when feasible Implement measures to mitigate traffic congestion during peak tourism season Support improved east-west travel through the MPO, and interregional north-south connections to Erie and Ottawa County Identify developing & expanding corridors & implement appropriate regulations prior to development occurring Encourage alternative modes for transport for persons and goods.

Goal	Goal Statement	Objectives
Freight Movement & Economic Vitality	Improve the local freight network & support the economic vitality of the MPO area	Integrate land use and freight transportation planning processes Invest in and promote region's multimodal and intermodal capabilities Improve freight mobility, safety, and operations Expand regional freight planning capabilities Increase freight awareness among all stakeholders, including the public Foster strategic partnerships and alliances for enhanced freight movement
Goal	**Goal Statement**	**Objectives**
Environmental Sustainability	Protect the environment in the MPO system & enhance the transportation system's performance simultaneously	Use transportation project selection criteria to promote alternative transportation methods &/or projects that protect & enhance the environment Maintain a planning process that integrates & coordinates transportation planning with land use, water & natural resource conservation Minimize, avoid &/or mitigate environmental impacts of transportation improvements by preservation of the existing transportation network Provide equitable & environmentally just transportation facilities & services Promote consistency between transportation improvements, local planned growth & economic development patterns Support energy conservation initiatives with special emphasis on those being undertaken in the MPO region related to wind energy, biofuels & other alternative fuels

Goal	Goal Statement	Objectives
Reduced Project Delivery Times	Reduce project costs, promote jobs & the economy, & expedite the movement of people & goods by accelerating local project completion through the elimination of delays in the process	Support efforts that coordinate local policies & projects with those at regional & state levels Encourage expedited project delivery Use transportation project selection criteria to promote reduced project delivery times that expedite the movement of people & goods
Goal	**Goal Statement**	**Objectives**
Congestion Reduction	Reduce congestion in the MPO area	Use transportation project selection criteria to promote alternative transportation & other congestion relief methods Enhance transit services to promote service to major employment centers, educational facilities, medical offices, commercial developments & tourist destinations Maximize bicycle & pedestrian connections to roadways, transit services & area amenities such as the waterfront & regional parks Encourage communities to incorporate bicycle & pedestrian facilities within major new residential & commercial developments

Chapter 3. Public Involvement Summary

3.1 Development of the Public Involvement Process

The key component of any long-range planning process is public outreach and citizen participation through a variety of methods to gather citizen data. As a result, the ERPC has committed itself to pursuing a pro-active public outreach effort throughout the development of the Erie County MPO 2050 Long-Range Transportation Plan. Public outreach efforts focused on soliciting community involvement in order to maximize awareness and provide a forum for public participation in order to build support and gain public input for the plan. The principles of the Public Involvement Plan (PIP) were to:

- Establish/maintain a partnership between residents, the business community and the core area stakeholders
- Involve the communities, local units of government early and at key junctures throughout the project
- Conduct a fair and equitable process
- Ensure that the plan reflects the goals of the expanded planning area

The Public Involvement Plan (PIP) details the techniques that were used in the LRTP to identify, notify and gain input from all those potentially affected within the study area. The techniques outlined in the plan ensured that the principles of the plan were met. The approach to public involvement for the ERPC LRTP will utilize the PIP's strategies to encourage early and on-going involvement in the project by:

- Providing helpful information
- Providing timely notice
- Providing public access to key decisions
- Ensuring consideration of significant comments

3.2 Implementation of the Public Involvement Process

Development of the Erie County MPO LRTP began in the fall of 2023, as ERPC Staff began working with Ottawa County stakeholders on the expanded MPO and defining the Metropolitan Planning Area for our MPO. In that same winter, ERPC staff began collecting a wide variety of background information and planning literature regarding existing transportation conditions in the county. The collection and analysis included current land use, transportation system data, issues identification and goals and objectives. Throughout the data collection process, staff carried out the project's public involvement process. Following the Coronavirus pandemic in 2020, ERPC incorporated online elements into their public participation process as part of necessary adjustments. Today, ERPC's public involvement process is a two pronged approached that includes online activities to remain accessible to residents in the planning area, and public engagement that will incorporate meetings and stakeholder surveys to stay engaged with our regions residents for our plan development process.

3.3 Results of the Public Involvement Process

Numerous major public involvement techniques were planned to be utilized during the public involvement process. These activities included:

- Public Meeting
- Emails
- Flyers/Handouts
- Online Public Survey
- Online Stakeholder Surveys
- Newspaper advertisements
- Social media postings
- Online postings of draft plan, maps, survey results, and other related materials
- Comment forms

Public Meeting: During the course of the development of the ERPC MPO LRTP development, there were three public meetings held to inform the public of the LRTP update, gather public input, and keep the public informed on the plan's progress.

The first public meeting was held on October 23, 2024 at the Shores and Islands Visitor Center conference room in Danbury Township, Ottawa County. A second open house was held the following day on October 24th at the Erie County office building in downtown Sandusky. Newspaper ads were ran in advance of the meeting, and notices were included on the ERPC MPO website. Materials included a presentation with an overview of the MPO and plan purpose, print outs of the previous 2045 Long Range Transportation Plan maps, interactive table top exercises, and the public survey gauging local interests and priorities for planning in our region. Both formal open houses were sparsely attended, resulting in one survey over the two meetings. As part of a proactive public involvement process, ERPC staff continued to schedule at other public events to try and meet people where they are for better engagement.

A plan update public meeting was held on June 26th to review the draft plan and solicit additional comments or feedback from stakeholders and the public. The meeting was held at 3rd Floor Chambers at the Erie County Office Building in downtown Sandusky. Drafts of the plan chapters and project maps and data were printed. A presentation was prepared detailing highlights of the long range plan and its development process. Two attendees were on hand to provide feedback, and inquire on future planned projects. The comments received at the final open house were incorporated into the draft plan before final approval.

Stakeholder Surveys: ERPC Staff conducted one-on-one in person stakeholder interviews with local public officials in the summer of 2024. This included representatives from local cities, villages, and larger townships to assess the current state of project plans and developments that impact the MPO planning region. In addition to the in-person stakeholder interviews, ERPC conducted an online stakeholder surveys. Stakeholders represented public, private and non-profit interests whose organizations have a major stake in transportation and development within the planning region. Staff identified over 160 stakeholders (see public involvement appendix for full stakeholder list) to provide insight into what they considered critical in understanding the development and transportation issues impacting the MPO study area. An online survey was developed and emailed to stakeholders to better assess what business and

community leaders of the county perceive to be the key transportation issues in for the next twenty-five years; and how best to solve current or anticipated transportation problems in the future.

Staff received nine survey responses to the email survey request. The project team followed up via telephone and email with those stakeholders that did not complete the online survey in an attempt to gather additional stakeholder input. Below are the survey questions that were asked to stakeholders:

1. What transportation issues concern you with respect to your community or organization?
2. How have the needs of your community or organization changed as a result of changes in the transportation system over the last five to ten years? What have you done as an organization to combat these changes?
3. What do you see as the predominant travel patterns within and through Erie County?
4. What portion(s) of the Erie County area are difficult to access by automobile? Please be specific as possible.
5. What areas of the County do you think are most likely to develop in the next 20 years?
6. Do you think better road signage is needed? If so, where?
7. How would you characterize the Erie County area's transit opportunities? What would you want to do to improve these services?
8. Have you had experience with any alternative transportation programs (carpooling, telecommuting) in your community or within your organization?
9. Do you believe that both new development and redevelopment activities will generate significant traffic congestion and parking problems within Erie County? If so, where do you think these problem areas will be and what do you believe are potential solutions?
10. What are your impressions of the bicycle and pedestrian facilities in the Erie County area?
11. Please rank where transportation, redevelopment activities, environmental protections, and preserving the character of the community fall in the hierarchy of issues affecting the Erie County area.
12. "With respect to transportation in the Erie County area, the thing I am most concerned about is _____."
13. "While this stakeholder interview session did not address _____, I hope the Erie County 2050 Long Range Transportation Plan tackles this issue anyway."
14. What do you see as the Goals and Objectives of the Erie County 2050 Long Range Transportation Plan?

Responses: The compiled summary of responses from the online surveys and interviews are included in the public involvement appendix at the end of this document. A summary map of the issues and concerns that were collected through stakeholder interviews is shown in **Figure 3-3.1**. A majority of those surveyed indicated the following:

- Interviewees indicated that they were most concerned about multi-modal access, safety and congestion on the region's transportation network.

- The needs of the community/organization that have changed as a result the transportation system include infrastructure and regulations/policy. Many also mentioned travel patterns changing due to navigation devices/GPS routing.

- Many believed that more signage is needed along main routes (especially those leading to Cedar Point). Also, many mentioned the need for larger signs that motorists can read easier.

- Respondents felt that public transit has become more accessible and that it can be improved by expanding service, access and undergoing a fare reduction. Many also mentioned the need for bus shelters at stops and having bus pull-offs in an attempt to not to impede traffic flow on the main roads.

- A majority believed that new development and redevelopment activities have increased congestion and have created parking problems. Within the City of Sandusky (congestion) and the City of Vermilion (parking) were identified. The top solutions suggested were increasing capacity and adding parking.

- Bicycle and pedestrian facilities in the area were perceived as needing improvement. They are viewed as being disconnected and in poor condition. Overall, improvement of facilities was recommended.

- The biggest concern about the future transportation system was funding.

- Sidewalks on US 250 (from Bogart Road to Kalahari) were also mentioned by many to be a safety concern, especially for bicyclists and pedestrians.

- Additional improvements along the US 6 corridor were mentioned by many respondents.

Special Presentations: In addition to public meetings, substantial outreach efforts were planned to occur throughout the LRTP process in order to solicit community input. ERPC presented on the survey at the October Creating Healthy Communities committee, that includes various organizations focused on creating healthy living environments within Erie County. ERPC Staff presented the plan and survey separately to both the Erie and Ottawa County Mobility Management Technical Advisory Committee (TAC), hosted by Great Lakes Community Action Partnership (GLCAP) and includes a cross section of non-profits and businesses with transportation needs. In addition, ERPC staff presented at the Kiwanis organization, made up of local volunteers and business owners.

Along with the scheduled meeting presentations, ERPC staff worked to meet people where they are, and attended two local community events. The first event was Pumpkins in the Park on October 13th in Port Clinton, where staff were on hand to engage with locals new to the MPO planning area. The booth distributed Halloween candy for children, and encourage the public survey from locals. Staff also attended the Osborn MetroPark parkrun on November 2nd, a weekly 5K series at the Osborn MetroPark. Staff volunteered, distributed candy, and answered questions on local projects occurring in the MPO area.

Online Public Survey: An online survey was also created to engage the public and was launched in October of 2024. The online survey included mapping and 20 questions in a multiple-choice format. In total, there were 42 citizens that participated in the survey. Staff analyzed these survey results and utilized them throughout the planning process (see Public Involvement Appendix). In order to obtain a more condensed compilation of answers, only limited options were available for a response. Below is a summary of the analyzed results:

- Survey takers felt that US 250 (Milan Road) was the most congested route in the area
- There was support for the following: more east-west connectors to provide better access, widening road shoulders for bike lanes when applicable and widening SR 4
- 67% said they have no plans to buy an electric vehicle in the near future and 68% indicated they would not feel comfortable using an autonomous vehicle
- 57% reported access to the outlying areas of Erie County was difficult
- The most popular side road taken to avoid congestion in Sandusky and Perkins Township is Columbus Avenue
- Regarding good accessibility to Columbus, OH and east-west connections throughout the area almost 75% of respondents stated that new routes are needed
- It was reported that the area most likely to develop in the next twenty years was Sandusky's downtown waterfront and the US 250 corridor south of State Route 2
- There was a majority of positive feedback received on the improvements implemented on US 250
- In regards to bicycle and pedestrian routes, survey takers showed a preference for added facilities in and around the northern portions of Perkins Township going into the City of Sandusky
- In regard to freight, survey takers indicated that roads were the most important asset to the area

Overall Results and Issue Resolution: As documented above and below in this chapter, project planners received a wide range of comments regarding the region's transportation needs. All the comments are important for documenting existing conditions in the county and for defining goals and objectives for the plan. However, in some instances, county residents and stakeholders identified issues for which action has been, or will be, taken by state and local entities. The most frequently cited issues are provided below along with an explanation of how the issue has been addressed or will be addressed soon**.** It should be noted, many of the issues expressed in the original 2005 LRTP still remain relevant today. Therefore, they continue to be listed with updates on the progress to resolve those issues in the Government Action/Resolution portion of the narrative.

- ***Congestion and Safety:*** Residents and stakeholders indicated that transportation planners should be focused on roadway reliability and congestion. The top two corridors respondents felt that we

most traveled and congested in the MPO area were the US 250 and US 4 Corridors. Numerous mentions were made relative to that increased congestion is also starting to occur on local roads due to navigation/GPS routing of traffic. Also expressed was the need to increase safety for all modes of transportation.

Government Action/Resolution: ODOT financed a safety and congestion control study for US 250 north of Bogart Road that was completed in 2005. The study, evaluated a number of improvement scenarios including (but not limited to) intersection improvements such as signal timing phases and turn lane additions; signal system improvements; roadway geometry improvements; interchange improvements (US 250 and SR 2); and access management strategies including driveway consolidation, shared driveways, frontage roads and turn restrictions. MPO staff worked to obtain financing to complete the recommended improvements listed in the study. Safety funding was also obtained to complete the reconstruction of intersections located at Strub Road/US 250 and Perkins Avenue/US 250. MPO staff assisted ODOT D3 with acquiring funding to complete the remaining corridor improvements. The Transportation Review Advisory Council (TRAC) did award funding and the project was completed in 2017. Adjustments have been made to the roadway to address ongoing safety and congestion concerns, and has seen steady improvement since the recommendations in 2005.

In 2019, a study of the US 6 Corridor (from Rye Beach Road to Sycamore Line Road including analysis of Butler Street in the City of Sandusky and Rye Beach Road to the railroad crossing in Huron) was finalized. The study's purpose was to review existing conditions and recommend improvements related to traffic flow and safety for both motorized and non-motorized users. Development along the corridor, including two large sport park facilities, along with future development and tourists utilizing the route for Cedar Point all created increased traffic volumes along the corridor. As a result of these events there has been increased congestion along the corridor during summer and fall peak times. Recommendations from the US 6 Corridor study included specific intersection, mainline and multi-modal improvements. MPO Staff and ODOT utilized the study to secure TRAC funding and Federal Rebuilding American Infrastructure with Sustainability and Equity (RAISE) funding for the project, and improvements are expected to begin construction in 2026.

ODOT Districts 2 and District 3 have utilized state funding to reduce congestion and improve safety at regional bottlenecks. Beginning in 2020, ODOT District 2 began work on implementation of two new roundabouts at the intersection of SR 2 and SR 53 in order to help alleviate peak summer time traffic volumes. The interchange had been challenged by vehicular congestion of recreational vehicles and trucks hauling boats to the tourist destinations in Danbury and Catawba Township. Construction of the roundabouts and area lane widening was completed in 2024. ODOT District 3 continues to address local safety concerns in Erie County, including the implementation of a roundabout at SR 4 and SR 99/Skadden Road. The safety improvements maintain traffic flows and improve safety on a key north/south corridor in the MPO planning area.

- ***Bicycle and Pedestrian Planning:*** Several comments were received regarding the lack of bicycle and pedestrian amenities in the county. Individuals stated that it is difficult to walk or bicycle in the planning region and commented on increased foot traffic in the region.

Government Action/Resolution: Since 2015, planning staff has been actively involved with the formation and facilitation of the bicycle and pedestrian committee. The committee's purpose is to work collaboratively on implementing the Bicycle and Pedestrian plan's goals. The committee consists of local jurisdictions and stakeholders. In addition to meeting with the committee throughout the year, ERPC also completed the 2020 Bicycle and Pedestrian Plan Update. Ottawa County established an Active Transportation Plan in 2018 and is dedicated to increasing access to safe multimodal facilities, and Greater Sandusky Partnership has actively developed a Sandusky Bay Pathway plan to help create a regional trail network. Current facilities in the region are fragmented, and impact workforce mobility and quality of life characteristics of the region. The continuation of the Bicycle & Pedestrian Advisory Committee, and coordination of three planning efforts are working to connect the isolated facilities and improve active transportation across the planning area.

- ***Impact of Future Development****:* Survey respondents largely expect future development to continue to occur along the lakefronts, including east of the city of Port Clinton with increased residential and retail development. Some residents noted development concerns along US 250 and SR 4 between the Ohio Turnpike and the city of Sandusky, as increased development would cause increased congestion. It was suggested that planning efforts should be undertaken to manage access and traffic volumes.

  Government Action/Resolution: Prior to the widening of US 250 south of Bogart Road, the highway was designated as a limited access highway and the ERPC developed an Access Management Plan. Therefore, access will be controlled as development occurs south of Bogart Road on US 250. It should be further noted, the Erie County Engineer's Office completed access management regulations in April of 2006 that will guide access management throughout Erie County as a whole. In the spring of 2020, ERPC, the Ohio Department of Transportation (ODOT) District 3, Huron Township, Perkins Township, the Erie County Engineers and Sheriff Offices met to discuss pedestrian safety at the US 250 and Kalahari Drive intersection. ODOT D3 has requested and received safety funding to make improvements across US 250 which include pedestrian crossing push buttons and pavement markings. In addition, ERPC is working with Perkins Township to apply for safety funding for the installation of a sidewalk from the Bogart Road intersection to the existing sidewalk at Kalahari.

  State Route 4 has come under increased attention statewide. The corridor has been studied numerous times as a crucial north-south connection dating back to the 1990's, with limited development occurring since that time. Recently, ODOT has completed the Strategic Transportation Development Analysis, identifying both the US 250 and SR 4 corridors as focus corridors as part of the Sandusky-Columbus corridor analysis. Limited access strategies and safety improvements are expected to be considered along SR 4 in future years to help manage development expectations in the region.

- ***Transit Service****:* Project planners heard that the public transit services have improved, but there is still a great need for expansion of the system, availability and for a reduction of fare costs.

  Government Action/Resolution: In the last few years, the City of Sandusky has been able to increase the fixed route efficiency through the creative use of grants, contracts and local

contributions. Through these efforts, they have managed to keep the system running with the City of Sandusky covering most of the costs. It is noted that the concerns brought up span multiple government agencies since transit is something that impacts all of the local municipalities within the planning area. In regard to Erie County, planning staff has worked with the transit system in obtaining federal funds since 2003, although financial support ended in 2003 as a result of a failed levy.

Since its inception, planning staff has been working towards improving the transit system through Coordinated Planning efforts. It is noted that since the last long-range plan update the Ohio Department of Transportation has greatly changed its requirements for the Coordinated Transportation Plan Program. New procedures include the creation of a stakeholder committee consisting of all local transit providers and users. The purpose of the committee is to work towards the goals and strategies outlined in the Coordinated Transportation Plan which were derived from transit stakeholders. ERPC staff assists the local mobility manager (provided through GLCAP) in these coordination meeting efforts. It is anticipated that once planning strategies and goals are put into action, they will alleviate some of the concerns mentioned above.

- ***Reducing costs and promoting job growths:*** Several stakeholders and local citizens indicated that there is a lack of coordination and cooperation between local governments and the state to implement economic development and transportation projects. In addition, people noted that there is also a lack of coordination between the local governments and private interests and developers.

  General Actions/Resolutions: Private and public partnerships have been created to develop major projects like the widening of US 250 south of Bogart Road and the US 6 Connectivity Corridor. To make these projects a reality, funding was provided not only by ODOT but also by Erie County, the City of Sandusky, the Ohio Turnpike, Lake Erie Shores and Islands and Cedar Point. These collaborations were critical to the success of both projects as part of unified plan for the region. Both counties, cities and Greater Sandusky Partnership (Formerly Erie County Economic Development Corporation) have several economic tools to help in project development such as: Tax Increment Financing (TIF), Community Reinvestment Areas (CRA), Revolving Loan Funds (RLF), Enterprise Zone tax abatements and various other state programs. Both Erie County and Ottawa County have Transportation Improvement Districts (TID) to help support infrastructure projects supporting economic development. In addition, the MPO has assisted organizations in applying for Transportation Funding (5310). Through this program agencies have been awarded transit buses and funds to conduct a feasibility study, regarding hiring a mobility manager for the area.

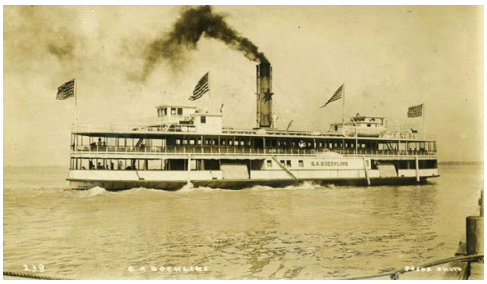
Chapter 4. Regional Profile

Introduction: The US Census Bureau completed their 2020 Census that provided much of the data that informs this report. Additionally, the American Community Survey is a nationwide survey completed by the Census Bureau that provides the most recent data for sections of this report. It is also important to note, the Ohio Department of Development (ODOD) county-level population control totals will be reflected in the final adopted Transportation Plan and air quality conformity determination and associated travel demand modeling procedures. Any variation from the ODOD county-level population control totals, for the Transportation Plan and Conformity Determination, will require substantial documentation, including interagency consultation. ODOD population control totals are not required for transportation and land use alternatives scenario planning. For ease of data reporting, although portions of Ottawa County are not included in the planning area, whole county numbers may be reported based on depth of data collection.

4.1 Historic Conditions, Comprehensive Plans, and Land Use

Regional History: Erie County and portions of Ottawa County were originally part of the Firelands, a land tract tracing its heritage back to the Revolutionary War. During the war, numerous Connecticut residents were burned out of their homes by British soldiers and as compensation, the Connecticut Assembly awarded the citizens 500,000 acres in the westernmost portion of the Western Reserve, which became known as the Firelands. . Erie County was established in 1838 when it was split from Huron County by the state legislature and included the Marblehead Peninsula. Two years later, portions of Erie, Lucas and Sandusky County were further subdivided to create Ottawa County in 1840. The region developed into a a center for transportation and trade through the creation of the Mad River and Lake Erie Railroad in 1835 and the Milan Canal in 1839. The City of Sandusky, the Erie County seat, was uniquely platted in the shape of the Masonic symbol in 1818. Because of its location on Lake Erie and the number of railroad lines that went through the city, Sandusky and Huron became a major terminal on the Underground Railroad. The City of Vermilion established itself as a major shipbuilding port due to its location on at the mouth of the Vermilion River on Lake Erie. With the opening of the man-made Milan Canal, the inland Village of Milan became a canal town with a link to the Huron River and Great Lakes. For a time, Milan was a leading Great Lakes port, however, with the advent of the railroad, Milan's canal and warehouses were eventually abandoned. The City of Port Clinton, the county seat of Ottawa County, was plotted and established in 1828 in an effort to encourage canal development along the portage river. The canal was never established, but trade in the region grew with the discovery of accessible limestone and gypsum that began to be quarried from the area peninsula. Today, the Lake Erie Ports of Huron and Sandusky provide access to Great Lakes shipping and world ports through the St. Lawrence Seaway, with railyards playing an important role in the east coasts rail system.

Relationship between Transportation and Land Use: The organization of daily life has created a demand for travel. The demand for publicly accessible transportation connections between geographic locations grew into a desire for faster and more comfortable travel. The result of this demand has been the development of extensive transportation networks and technological advances in the means of transportation. These transportation improvements in turn have impacted daily activities, where geographic distances are less of an impediment than in the past. Not long ago, walking distances defined the geographic relationship between daily activities. The destination of one's work, shopping, social and religious institutions needed to be within a reasonable walking distance of one's home. These distances were a function of time and the location of one's home and one's daily destinations were tied to how much time people were willing to take to travel between destinations. These "time budgets," were defined by the transportation system and the transportation modes available. Households still make travel decisions based on on-time budgets. However, the development of automobiles and the corresponding roadway infrastructure has made it possible to travel much greater distances within an allotted time, allowing daily activities to be located much farther from one's home.



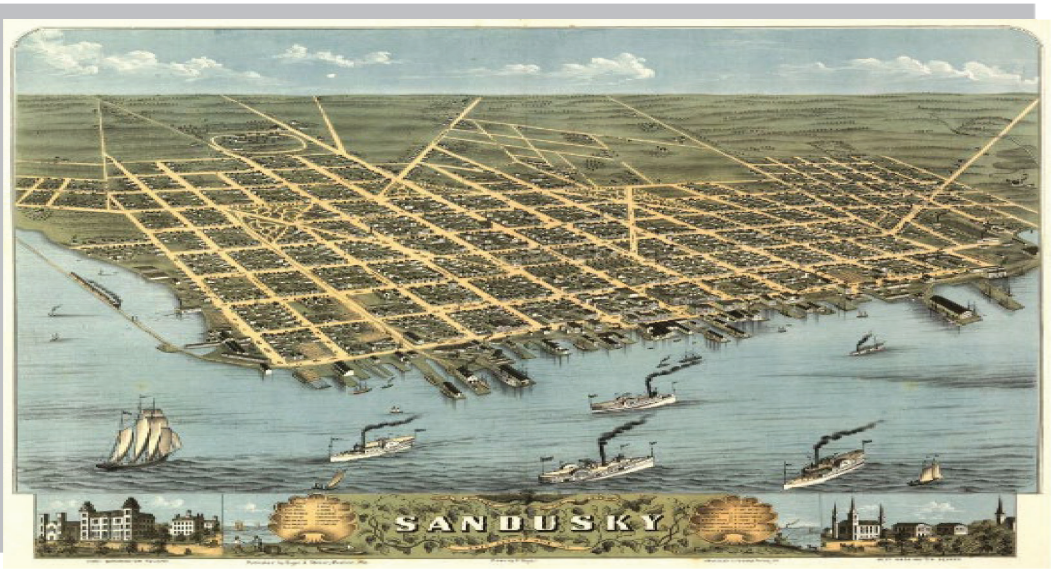
GA Boeckling[1]

Columbus Avenue in Sandusky[1]

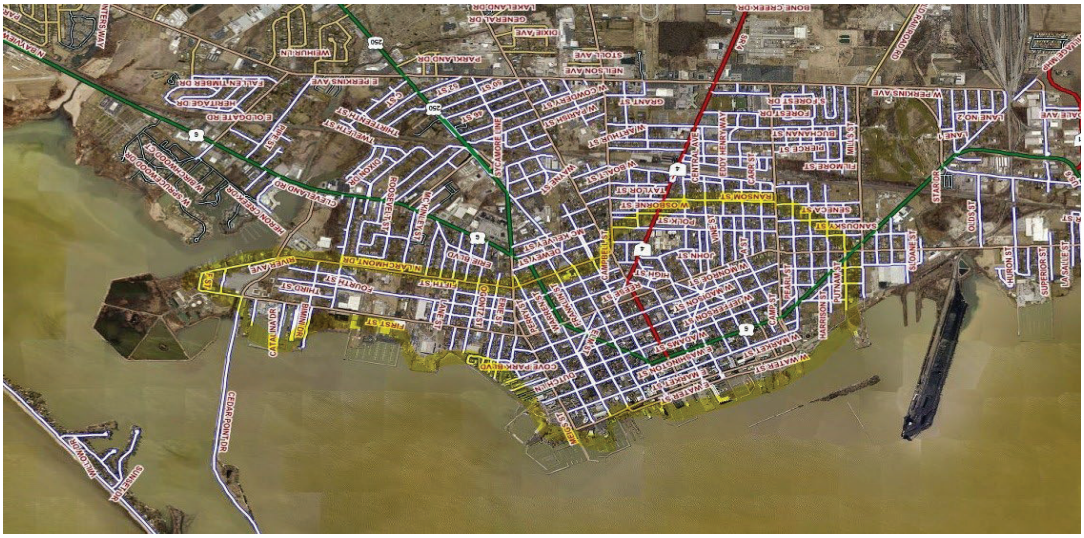
Ferry Boat Service[1]

Lake Erie Railroad in Vermilion

Just as the transportation system impacts location and destination decisions the mix and design of destinations greatly impact the demand for the transportation system. Improved transportation systems allow greater accessibility between dispersed land uses. In turn, dispersed land uses require more travel and thus more demand for transportation infrastructure. The importance of land use and transportation should not be underestimated. Land use patterns and development decisions are often seen as controlled solely by market forces, leaving public agencies to respond to the transportation demand created in their wake. However, public land-use policies directly affect private land-use decisions such as zoning regulations and minimum parking requirements. Therefore, land-use policies need to be considered with the impact of transportation just as transportation policies need to be considered with land use. Transportation systems and land use patterns have a well-documented reciprocal relationship. As communities have grown, the demands for transportation system improvements have also grown. However, these transportation improvements have also provided more convenient access to land farther out, thus spurring further growth. The automobile has impacted land use patterns more than any other transportation system over the past half-century.



Lithograph of Sandusky in 1870: Urban area end near Scott, Fifth and Mills Streets[1]



Same Area Present Day- Yellow Lines show the Approximate 1870 Urban Boundaries

Figures 4-1.2: Land Use Changes

4.2 Existing Conditions

Geography: Following the 2020 Census, the Sandusky urbanized area was expanded to include the city of Port Clinton in Ottawa County. With the change, the ERPC MPO expanded to include the eastern portion of Ottawa County, and became a multi-county planning agency. Together, Ottawa and Erie County are two of the eight coastal counties in Ohio, with a combined land area 495 square miles, 149 miles of coastline, and the Sandusky Bay connecting the counties geographies.

Erie County has a land area of 255 square miles, water area of 371 square miles, and a population density of 292 people per square mile.[1] Erie County consists of approximately 55 miles of shoreline along Lake Erie. Erie County is bounded by Lorain County to the East, Huron County to the South, Sandusky and Ottawa Counties to the West and Lake Erie to the North. The majority of the county land use consists of cropland (51%) and forests (18%), with developed areas accounting for an additional 19%.[2] The transportation network in Erie County consists of 26 interstate highway miles, 42 US highway miles, and 114 state highway miles. There are 623 county, township, and municipal road miles, three small public-use airports, two shipping ports, and 78 miles of rail line.[3] The City of Sandusky, incorporated in 1824, is the largest city in Erie County and serves as the county seat.

Ottawa County has a land area of 255 square miles, water area of 330 square miles, and a population density of 158 people per square mile.[4] Ottawa County consists of approximately 94 miles of shoreline along Lake Erie and Sandusky Bay shore, and is bounded by Erie County to the east, Sandusky County to the south, and Wood and Lucas County to the West. Lake Erie borders the county to the north. The majority of the county consists of cropland (59%) and wetlands (13%), with developed areas making up 15% of the land use. The transportation network across the county includes 4 interstate highway miles, 140 state highway miles and 546 miles of county, township and municipal road miles. There are 5 commercial airports, and includes the Ottawa-Erie International Airport, a shipping port, over 115 miles of rail lines, and ferry services providing access to the Lake Erie Islands. The county seat is located within the MPO planning area in the City of Port Clinton, which was incorporated in 1828.

Population: Across the region, there has been a consistent decrease in population within the MPO planning area of 1.8%. The current population count in the metropolitan planning area is 100,623, with 75,622 individuals in Erie County, 18,979 individuals in Ottawa County, and 6,022 individuals in the City of Vermilion within Lorain County. Cities and villages in particular have seen a trend down in total population between the 2010 and 2020 census. Of the identified political jurisdictions in the urban areas, the City of Vermilion, and townships of Huron, Perkins, and Catawba showed minor growth, while the rest lost population. It is noted that population loss was minor with an estimated loss of fewer that one hundred residents in the following political jurisdictions: the City of Port Clinton, villages of Bay View, Marblehead, Kelley's Island, Berlin Heights, Castalia, Milan, and townships of Vermilion, Erie, Portage, Oxford, Groton and Milan. (**see Figure 4-1.1**).

[1] http://www.city-data.com/county/Erie_County-OH.html accessed 5/2024
[2] Ohio Department of Development, Erie County Profile, 2023
[3] ODOT, Erie County Regional Freight Plan, 2023
[4] https://www.city-data.com/county/Ottawa_County-OH.html accessed 5/2024

Political Jurisdiction	County	1980	1990	2000	2010	2020	ACS (2022)	Change 2010-2020	Change Percent
Erie County*	ERIE	85033	82423	85468	82929	81640	81624	-1289	-1.6%
Ottawa County	Ottawa	40076	40029	40985	41428	40364	40367	-1064	-2.6%
Ottawa County within MPO	Ottawa	19621	19550	19218	19563	18979	18978	-584	-3.0%
City of Sandusky	ERIE	31360	29764	27844	25793	25095	24964	-698	-2.7%
City of Huron	ERIE	7123	7030	7958	7149	6922	6882	-227	-3.2%
City of Vermilion**	ERIE	11012	11127	10868	10594	10659	10459	65	0.6%
City of Port Clinton	Ottawa	7223	7106	6346	6056	6025	6024	-31	-0.5%
Perkins Township	ERIE	10989	10793	12578	12202	12390	12348	188	1.5%
Catawba Township	Ottawa	3402	3148	3157	3599	3711	3703	112	3.1%
Danbury Township	Ottawa	3735	3665	3872	4264	4059	3969	-205	-4.8%
Vermilion Township	ERIE	4393	4051	4638	4945	4857	4628	-88	-1.8%
Huron Township	ERIE	2156	2267	2572	3548	3802	3778	254	7.2%
Margaretta Township	ERIE	4759	4601	4662	4497	4258	4156	-239	-5.3%
Bay View Village	ERIE	804	739	692	632	608	710	-24	-3.8%
Marblehead Village	Ottawa	679	745	759	903	865	962	-38	-4.2%
Kellys Island Village	ERIE	121	172	347	312	256	221	-56	-17.9%
Bay Township	Ottawa	940	1276	1365	1458	1142	1226	-316	-21.7%
Erie Township	Ottawa	1518	1454	1382	1221	1147	1113	-74	-6.1%
Portage Township	Ottawa	1568	1600	1553	1291	1217	1284	-74	-5.7%
Put In Bay Village	Ottawa	146	141	149	138	154	89	16	11.6%
Put in Bay Township	Ottawa	410	415	635	633	659	608	26	4.1%
Oxford Township	ERIE	1198	1150	1079	1201	1140	1129	-61	-5.1%
Groton Township	ERIE	1235	1245	1360	1427	1379	1461	-48	-3.4%
Florence Township	ERIE	2119	2101	2500	2448	2470	2382	22	0.9%
Berlin Heights Village	ERIE	756	691	685	714	651	731	-63	-8.8%
Castalia Village	ERIE	973	915	982	852	774	757	-78	-9.2%
Berlin Township	ERIE	2725	2628	3017	3009	2799	3434	-210	-7.0%
Milan Village***	ERIE	1181	1056	1025	1004	997	1001	-7	-0.7%
Milan Township	ERIE	2129	2093	2661	2602	2583	2583	-19	-0.7%
Total	**ERPC MPO**	**104654**	**101973**	**104686**	**102492**	**100619**	**100602**	**-1873**	**-1.8%**

*Includes Vermilion in Lorain County
**Includes Lorain and Erie County
***Only includes Erie County portion of Milan

Figure 4-2.1: Largest Places Population Changes

Sex and Age: Overall the largest population cohorts in the planning area tend to be aged older, and consists of those aged 55-59, 60-64, and 65-70. It was noted that the approximately 25% of the population is aged 65 years and older, and 19% is under 18 years. The median age in Erie County is approximately 44.8 years, and in Ottawa County it is 49.8 years.[5] This is discussed further in **Section 4.4**. It is assumed that the typical 65 year old today will to age 85, and one out of every three 65-year-olds today will live at least to age 90. About one out of seven will live at least to age 95.[6] As noted in **Figure 4-1.2,** there are larger numbers of older population cohorts than younger across the planning area. Although this is true for the state of Ohio also, the region's pattern starts decreasing at a steeper level showing a decrease from those 50 and younger; which means that there will be a disproportionately older population in the coming years compared to the younger population.

Another important demographic characteristic of the population is gender structure. Gender can be used as an indicator of population and as a future planning tool as females typically live longer than males. According to data compiled by the Social Security Administration, A man reaching age 65 today can expect to live, on average, until the age of 84. A woman turning age 65 today can expect to live, on average, until the age of 86.[7]

[5] Ohio Office of Policy, Research and Strategic Planning, 2018
[6] https://www.ssa.gov/planners/lifeexpectancy.html accessed 5/2024
[7] https://www.ssa.gov/planners/lifeexpectancy.html accessed 5/2024

Across the planning area at the time of 2020 census, the female population was 51,251 (50.9%), while the male population was 49,372 (49.1%)

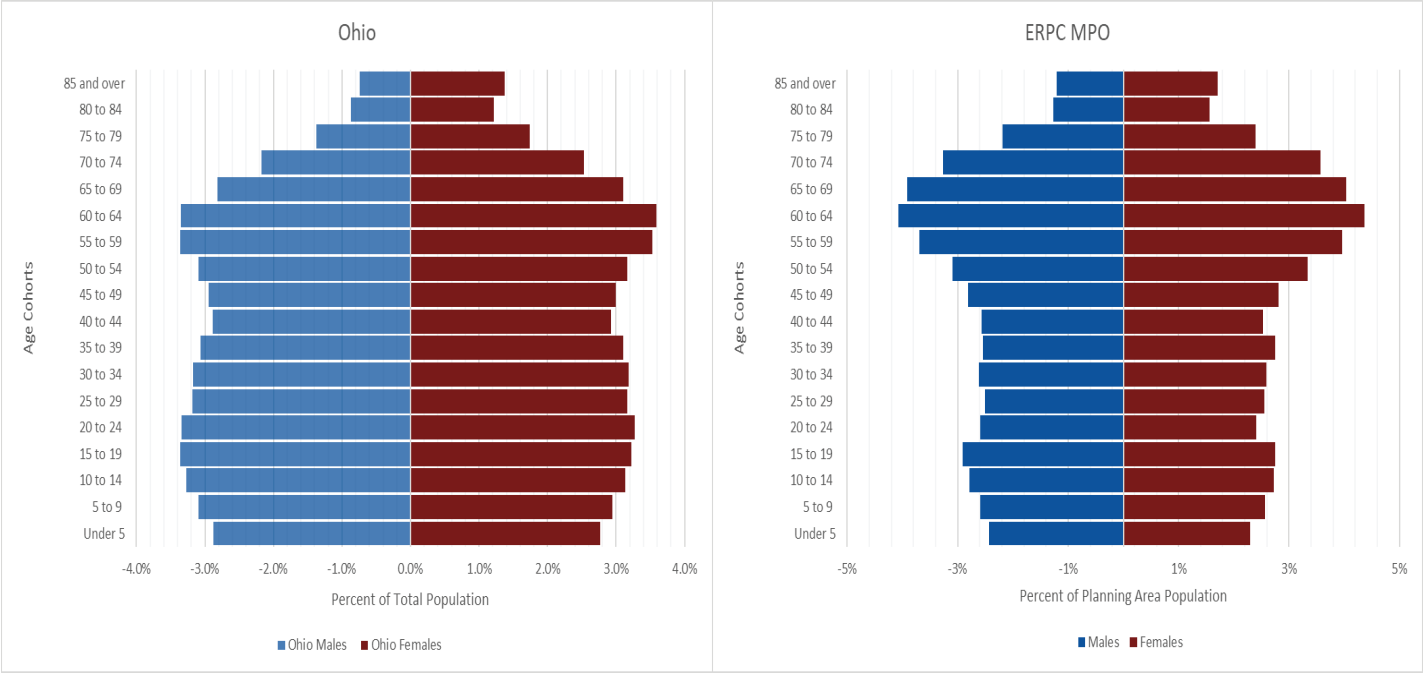
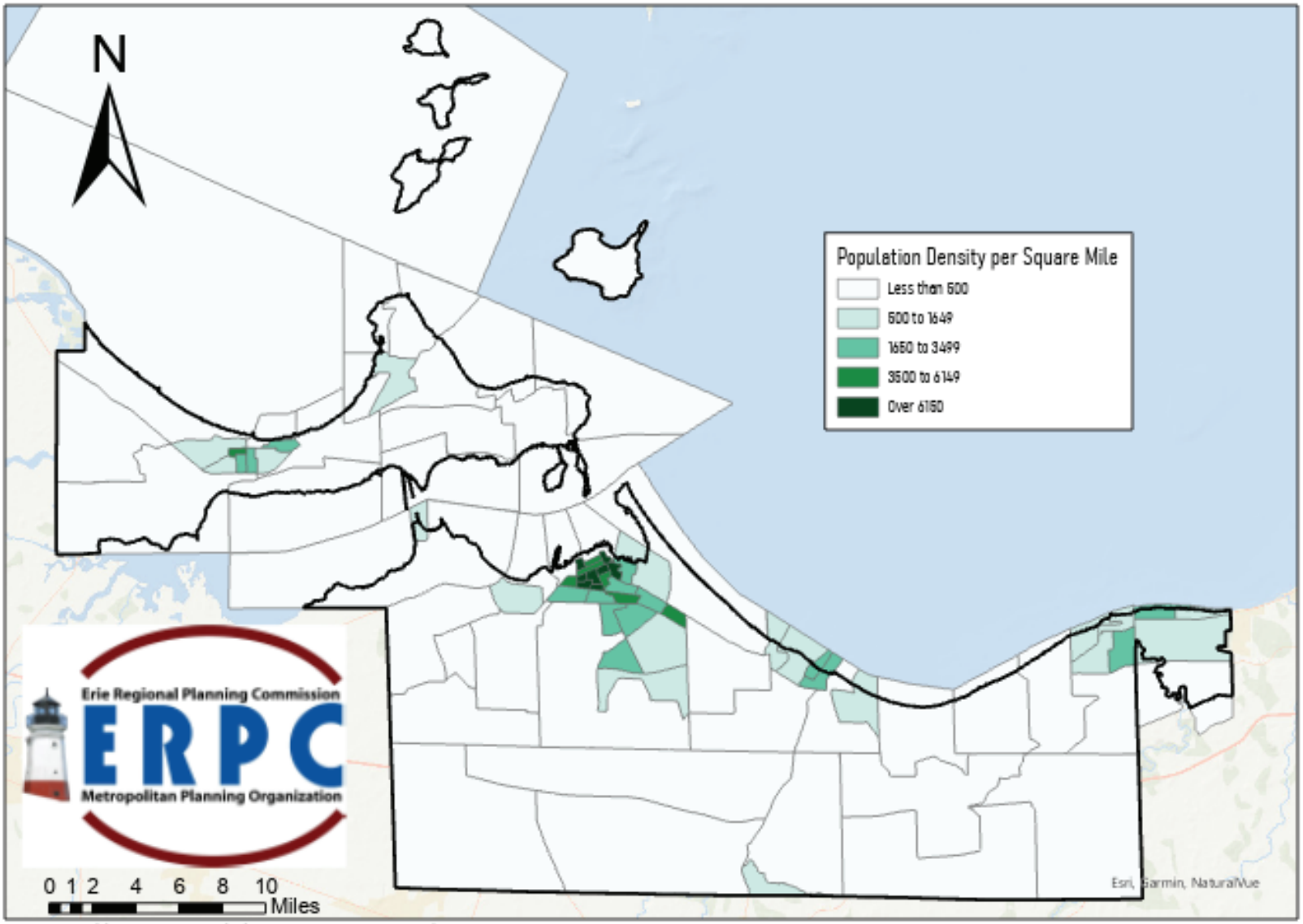


Figure 4-2.2: Population Pyramids

Density: The majority of the region's population is located within the urban areas as identified in the map below. The population by census block groups is shown below in **Figure 4-2.3**. Nearly three-fourths of the population lives within urbanized areas or in urban clusters, focused primarily in Port Clinton, Sandusky, Huron and Vermilion. Outside the urbanized areas, census block groups are quite large. Therefore, the population map may be mistakenly interpreted suggesting a greater concentration of people in rural areas. Housing density information is a useful consideration in the evaluation of various transportation facilities. Transportation improvements that serve more households per unit of improvement will generally produce greater utility, all else being equal. For example, public transit service in a higher density residential area can serve more households per vehicle mile of service than transit service in a lower density residential area. Similarly, a mile of sidewalk or trails in a high-density area can serve more people than in a low-density area.



Map prepared by Erie Regional Planning Commission, and is intended for illustrative purposes only. Erie County, Ohio assumes no responsibility or liabilities for any errors or omissions contained here in.

Figure 4-2.3 Population Density by Block Group

ERPC MPO 2050 Long Range Transportation Plan

Education: The population within the planning area consists of 92% of residents having at least graduated high school and approximately 27% having a Bachelor's degree or higher (see **Figure 4-1.4**). Within the planning area, there are several colleges including Bowling Green State University's Firelands Campus and Resort and Attraction Management Campus, and Ohio Business College. There also is a vocational school, EHOVE.

Education

	Erie County, OH	Ottawa County, OH
Total Population 25 yrs or older, 2022*	54,257	30,571
No high school degree	4,419	2,109
High school graduate	49,838	28,462
Associates degree	5,151	2,959
Bachelor's degree or higher	14,360	8,221
Graduate or professional	4,931	2,964
Percent of Total		
No high school degree	8.1%	6.9%
High school graduate	91.9%	93.1%
Associates degree	9.5%	9.7%
Bachelor's degree or higher	26.5%	26.9%
Graduate or professional	9.1%	9.7%

Figure 4-2.4: Education[8]

Household Types: The majority of households within the planning area consists of married couple families followed by non-family households. Of these households, 23% have children at home under the age of 18, while households with individuals age 65 and over account for 39% of residences. The average household size is 2.23 persons per households in 2022 across the planning area., [9]

Homeownership: Owner-occupied housing units consist of 74% of housing units across both counties, while the remaining 26% are rental units. Approximately 27% of housing units were surveyed as vacant. The regions lake access paired with the area's tourist attractions has resulted in increased seasonal homes, at 20% of the units, and 75% of the total vacant housing stock. The median housing value is $203,400. The median costs of a monthly mortgage payment is $1,412 and the median gross rental cost per unit is $934.

Employment: Erie and Ottawa County enjoys a diverse economic base. Staff found that as of May 2022 the total population age 16 to 64 was 44,977 in Erie County, with 35,755 civilian employees, and 23,661 in Ottawa County with 19,043 civilian employee's active in the labor force.

Job Types: Between Erie County and Ottawa County, Education, Health Care, and Social Assistance has the largest share of the job sector of civilian employees at 23%. Manufacturing makes up 18% of the job sectors, followed by retail trade at 11%. Worker classes are shown below in **Figure 4-1.5,** with job sector break downs in **Figure 4-1.6.**

[8] Headwater Economics, 5/2020
[9] Ohio Office of Research accessed 5/2020

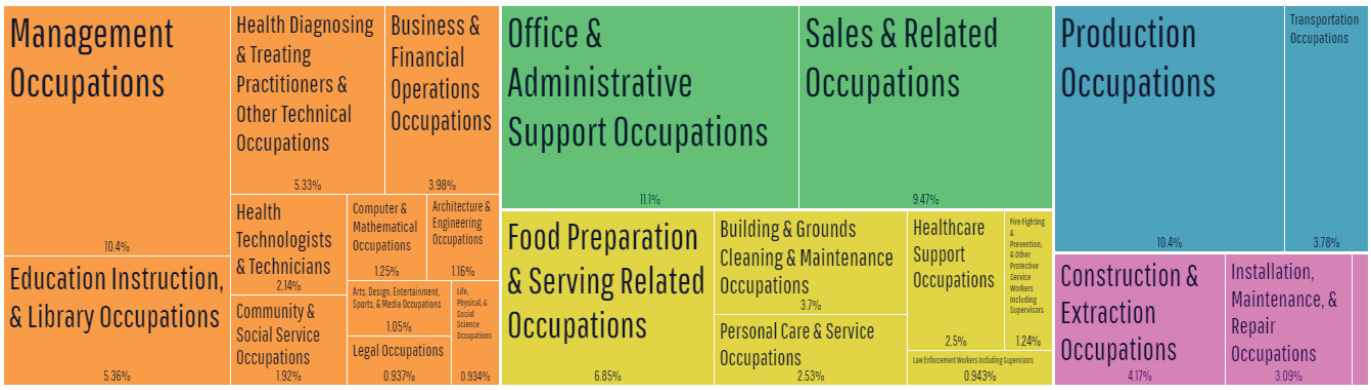


Figure 4-2.5: Worker Class[10]

(Image from DataUS.IO, data from ACS 5-year estimate, Accessed 6/2024)

	Erie County, OH	Ottawa County, OH
Civilian employees > 16 years, 2022*	35,755	19,043
Ag, forestry, fishing & hunting, mining	˙541	˙182
Construction	1,885	1,511
Manufacturing	6,310	3,336
Wholesale trade	˙716	˙404
Retail trade	3,907	1,887
Transport, warehousing, and utilities	2,186	1,203
Information	˙660	˙155
Finance and ins, and real estate	˙1,610	˙1,108
Prof, mgmt, admin, & waste mgmt	2,156	1,337
Edu, health care, & social assistance	8,355	4,361
Arts, entertain, rec, accomod, & food	4,351	1,887
Other services, except public admin	1,800	˙1,015
Public administration	˙1,278	˙657
Percent of Total		
Ag, forestry, fishing & hunting, mining	˙1.5%	˙1.0%
Construction	5.3%	7.9%
Manufacturing	17.6%	17.5%
Wholesale trade	˙2.0%	˙2.1%
Retail trade	10.9%	9.9%
Transport, warehousing, and utilities	6.1%	6.3%
Information	˙1.8%	˙0.8%
Finance and ins, and real estate	˙4.5%	˙5.8%
Prof, mgmt, admin, & waste mgmt	6.0%	7.0%
Edu, health care, & social assistance	23.4%	22.9%
Arts, entertain, rec, accomod, & food	12.2%	9.9%
Other services, except public admin	5.0%	˙5.3%
Public administration	˙3.6%	˙3.5%

High Reliability: Data with coefficients of variation (CVs) < 12% are in black to indicate that the sampling error is relatively small.
Medium Reliability: Data with CVs between 12 & 40% are in orange to indicate that the values should be interpreted with caution.
Low Reliability: Data with CVs > 40% are displayed in red to indicate that the estimate is considered very unreliable.

Figure 4-2.6: Job Sectors of Civilian Employees[11]

[10] ACS Five Year Class Of Worker By Sex For The Full-Time, Year-Round Civilian Employed Population 16 Years And Over, 2018
[11] Headwater Economics, 5/2020

Largest 15 Employers				
	Erie County		Ottawa County	
#	Name	Employees	Name	Employees
1	Cedar Point*	6500	Materion Corporation	672
2	Firelands Regional Medical Center	2000	Davis-Besse Nuclear Power Station	548
3	Kalahari Resort	1228	Luther Home of Mercy	402
4	Erie County	700	LogistiQ	379
5	Sandusky City School	650	Magruder Hospital	343
6	Meijer Department Store	475	United States Gypsum	280
7	Great Wolf Lodge	350	Northern Manufacturing	151
8	Ohio Veterans Home	350	Avery Dennison	145
9	Walmart Department Store	350	Bassett's Market	138
10	Perkins School System	320	Genoa Retirement Village	119
11	Providence Care Centers	250	Riverview Industries	104
12	City of Sandusky	236	Fenner Dunlop	96
13	Corso's Flower and Garden Center	200	Genoa Banking Company	82
14	Mucci Farms	200	Otterbein Marblehead	65
15	News-2-You	178	Signature Label	63

Erie County 2024 AFIS Report, Accessed 5/2024

**Seasonal Peak Employment, 400 Year round*

Ottawa County Improvement Corporation, Accessed 5/2024

Figure 4-2.7: Top Regional Employers and Employee Numbers[12]

[12] Erie County Economic Development Corporation, 2020

Wages by Industry

	Ottawa County				Erie County			
Employment and Wages in 2022	Wage & Salary Employment	% of Total Employment	Avg. Annual Wages (2023 $s)	% Above or Below Avg.	Wage & Salary Employment	% of Total Employment	Avg. Annual Wages (2023 $s)	% Above or Below Avg.
Total	13,671		$52,130		36,050		$48,636	
Private	11,395	83.4%	$51,366	-1.5%	31,219	86.6%	$47,205	-2.9%
Non-Services Related	2,974	21.8%	$66,780	28.1%	7,326	20.3%	$60,481	24.4%
Natural Resources and Mining	195	1.4%	$61,312	17.6%	757	2.1%	$52,363	7.7%
Agriculture, forestry, fishing & hunting	82	0.6%	$39,261	-24.7%	710	2.0%	$50,126	3.1%
Mining (incl. fossil fuels)	113	0.8%	$77,313	48.3%	47	0.1%	$86,159	77.2%
Construction	714	5.2%	$66,599	27.8%	1,016	2.8%	$60,295	24.0%
Manufacturing (Incl. forest products)	2,065	15.1%	$67,358	29.2%	5,553	15.4%	$61,621	26.7%
Services Related	8,404	61.5%	$46,015	-11.7%	23,915	66.3%	$43,095	-11.4%
Trade, Transportation, and Utilities	2,400	17.6%	$68,422	31.3%	6,387	17.7%	$44,028	-9.5%
Information	33	0.2%	$54,537	4.6%	393	1.1%	$55,646	14.4%
Financial Activities	430	3.1%	$59,642	14.4%	973	2.7%	$73,609	51.3%
Professional and Business Services	459	3.4%	$48,449	-7.1%	1,691	4.7%	$58,456	20.2%
Education and Health Services	1,832	13.4%	$42,887	-17.7%	4,644	12.9%	$55,949	15.0%
Leisure and Hospitality	2,845	20.8%	$28,230	-45.8%	9,019	25.0%	$29,822	-38.7%
Other Services	404	3.0%	$34,286	-34.2%	798	2.2%	$35,207	-27.6%
Unclassified	1	0.0%	$83,936	61.0%	10	0.0%	$18,513	-61.9%
Government	2,276	16.6%	$55,954	7.3%	4,831	13.4%	$57,880	19.0%
Federal Government	255	1.9%	$88,472	69.7%	240	0.7%	$82,990	70.6%
State Government	172	1.3%	$65,055	24.8%	790	2.2%	$64,353	32.3%
Local Government	1,849	13.5%	$50,623	-2.9%	3,801	10.5%	$54,949	13.0%

Figure 4-2.8: Erie County Local Job Sectors and Average Wage[13]

Unemployment: Erie County has an unemployment rate of 4.4%, for 17th highest county in the state according to the Ohio Department of Jobs and Family Services annual average. Ottawa County has an unemployment rate of 4.8%, the 6th highest in the state. [14] Unemployment rates were severely impacted during and immediately after the COVID pandemic beginning in 2020. The region's tourism sectors were heavily impacted by nationwide lockdowns and resulted in higher than average unemployment rates for not only the planning area, but all of Ohio as well. In standard years, the counties see unemployment rates vary between the slower winter seasons and busier tourist seasons during the summer months, and have largely began to return to pre-pandemic levels. Additionally, unreliable transportation can be a huge barrier to employment. For example, historically, low-income residents across the country live near urban centers, while the majority of the jobs they qualify for are in the suburbs. Public transit is often designed to take suburban residents from a central point outside the city into various areas within the city- but more often than not, city residents aren't able to take public transit to jobs in the suburbs.[15] Erie County is fortunate to have the Sandusky Transit System, which may be assisting with keeping the unemployment rate low since it covers the entirety of the county.

[13] ACS Wages and Employment ACS Five Year, 2018
[14] https://ohiolmi.com/Home/Lausbycounty?page85851=1&size85851=48&sort85851=Rate&sortdir85851=desc accessed 5/2020
[15] http://www.vehiclesforchange.org/unemployment-problem-complicated-by-public-transit/ accessed 5/2020

Year	Erie County	Ottawa County
As of 4/2025	6.3% (11th in state)	7.4% (1st in state)
2024	4.8% (30th)	6.0% (6th)
2023	4.4% (17th)	4.8% (6th)
2022	4.9% (16th)	5.2% (7th)

Figure 4-2.9: Unemployment Rates[16]

Income: According to the ACS 2022 the median household income in Erie County was $65,171, while Ottawa County was $69,515. Additionally, 37% of households in Erie County and 41% of households in Ottawa County received Social Security. The average income from Social Security across both counties was $22,255. 73% of households received labor earnings as listed in **Figure 4-1.9** across both counties. These income sources are not mutually exclusive; that is, some households received income from more than one source. With the relationship to transportation, something to consider is that transportation is the second-largest expense for most households after housing. Living closer to a workplace allows for greater disposable income which can improve the quality of life. In places with fewer transportation choices, savings on housing costs can be more than offset by increased transportation expenses. When applying this concept to transportation and land use planning more compact development could be explored. Compact, connected communities also allow residents to use less energy and spend less money to get around by making fewer or shorter car trips, or using other less expensive modes of transportation like bicycling, walking, or transit.[17] As reported in 2024, Ohio households spend $13,781 per year on transportation costs, or approximately 27% of income. This is higher than the national average (22%).

Household Earnings

	Erie County, OH	Ottawa County, OH
Total households, 2022*	32,103	17,995
Labor earnings	23,953	12,570
Social Security (SS)	11,885	7,400
Retirement income	9,796	6,171
Supplemental Security Income (SSI)	1,624	˚632
Cash public assistance income	˚1,149	˚276
SNAP (previously Food Stamps)	3,716	1,182
Percent of Total^		
Labor earnings	74.6%	69.9%
Social Security (SS)	37.0%	41.1%
Retirement income	30.5%	34.3%
Supplemental Security Income (SSI)	˚5.1%	˚3.5%
Cash public assistance income	˚3.6%	˚1.5%
SNAP (previously Food Stamps)	11.6%	6.6%

^ Total may add to more than 100% due to households receiving more than 1 source of income.

Figure 4-2.10: Household Earnings[18]
(orange denotes a possible inaccurate estimate)

[16] https://ohiolmi.com/Home/RateMapArchive accessed 5/2020
[17] http://www.fhwa.dot.gov/livability/fact_sheets/transandhousing.pdf accessed 5/2020
[18] Headwater Economics, 5/2020

Low-Income Populations: Low-income populations are defined as a person whose household income is at or below the US Department of Health and Human Services poverty guidelines. The guidelines for 2024 are $15,060 for an individual; $20,440 for a 2 person household; $25,820 for a 3 person household; and continues to $52,720 for an eight person household. More information can be found at: aspe.hhs.gov/topics/poverty-economic-mobility/poverty-guidelines
The highest concentration of those in poverty in the MPO area are located in in the City of Sandusky (**see Figure 4-1.11**).

No Vehicle Households: For some, not owning a vehicle represents a lifestyle choice. Such individuals may live in locations where car ownership is particularly expensive or impractical, and there are plentiful transportation alternatives for accessing jobs and meeting other household needs. Census data has shown that the majority of these zero-vehicle households face economic constraints to automobile ownership. Not only are cars themselves expensive, but households with lower incomes may also face higher costs for financing a car. Used cars offer a cheaper sticker price but tend to incur higher annual operating costs. Not owning a car may impart further economic disadvantage as well, as workers with cars work more hours per week than those without cars, enabling them to earn higher incomes.[19] Within the planning area, 3.9% of households do not have a vehicle available. This percentage is lower than the State of Ohio's rate of no vehicle households at 7.4%. The majority of households who do not have a vehicle available are located within the City of Sandusky, near the urban core or housing for seasonal employment at Cedar Point. (**see Figure 4-1.12**)

Minority Population: According to the 2022 ACS, 13% of the total population in the MPO area consists of minorities. The largest group is identified as black, or African American at 7%. The majority of minorities are located within the City of Sandusky. Annually, a demographics analysis examines this area for any possible negative environmental impacts when undergoing any transportation projects, and includes seeking out and considering the needs of low-income and minority households per 23 CFR 450.316 (**see Figure 4-1.13).**

Elderly Populations: The elderly population is defined as individuals aged 65 years and older. According to the 2022 ACS, the 65 and overpopulation consist of 24% of the population (**see Figure 4-1.14**) The majority of those aged 65 or over are located on Kelleys Island, Huron Township, and the Cedar Point peninsula on the eastern edge of the City of Sandusky.

Disabled Population: The US Census defines a disability as a long-lasting physical, mental or emotional condition. This condition can make it difficult for a person to do activities such as walking, climbing stairs, dressing, bathing, learning, or remembering. This condition can also impede a person from being able to go outside the home alone or to work at a job or business. There is a concentration of disabled populations within the Cities of Sandusky and Vermilion (**see Figure 4-1.15**). Across the planning area, approximately 15,499 people have disabilities, or 15% of the population.[20] Of those who are disabled, 50% of respondents reported ambulatory difficulties; 38% reported cognitive difficulties; and 34% noted disability related to independent living difficulty.

[19] https://www.brookings.edu/wp-content/uploads/2016/06/0818_transportation_tomer.pdf accessed 5/2020
[20] ACS Five Year Disability Characteristics, 2018

Limited English Speaking Ability: Within Erie County, 2,278 people, or 3.2% reported speaking another language other than English**.**[21] In Ottawa County, 1,132 people, or 2.9% speak another language other than English. A person with Limited English Proficiency (LEP) is one who does not speak English as their primary language and who has a limited ability to read, speak, write, or understand English. ERPC strives to reach out to all sectors of the population including those who cannot speak English very well. It is noted the eastern side of the City of Sandusky, Perkins Township, and Portage Township have a higher concentration of populations with limited English speaking ability (**see Figure 4-1.16**). This may be attributed to the various tourism-related industries located in these areas that frequently employ J1 students and workers from abroad. Depending on the time of year there are many different populations (Filipinos, Jamaicans, Ukrainians, Argentina, Peruvians, etc.) from all over the world that temporarily call the region home during the tourist season. The majority of the housing units established for these visitors are located within these areas.

- 461, or 50% of people that reported English as their second language felt that they spoke English "less than well"

- 1,268 people reported speaking Spanish as their primary language. 36% of those speakers reported speaking English "less than well"

- 908 reported speaking an Other Indo-European derived language as their primary language. 22% of those speakers felt they spoke English "less than well"

- 522 reported speaking Asian and Pacific Islander derived language as their primary language. 39% of these speakers reported speaking English "less than well".[22]

Demographics Analysis: Annually, ERPC staff conducts a demographics analysis of the projects occurring within the planning region**,** including identifying and addressing disproportionately high and adverse effects of the agency's programs, policies, and activities on minority populations and low-income populations to achieve an equitable distribution of benefits and burdens. ERPC intends to not adversely affect any specific population of our community. To assure this, all the Transportation Improvement Program (TIP) projects that the MPO helps fund are evaluated. The identification of targeted population areas was completed by assessing averages for poverty (11.5%), minority (13.2%), 65 years and older (24.0%), disability status (15.6%), limited English proficiency (3.1%) and zero vehicle household (3.9%) levels in the county based on regional averages. Demographic information was compiled from the 2022 Five Year American Community Survey data. To calculate poverty levels with the available data, demographic data on a census tract level was utilized. The data was reviewed to identify areas where the targeted populations were double the regional average. These target areas have been mapped along with capacity expansion projects, maintenance projects, and transportation enhancement projects to aid in the impact analysis. Subjective analysis for each project includes completing an environmental justice analysis matrix considering potential impacts that a project could have on an identified environmental justice area.

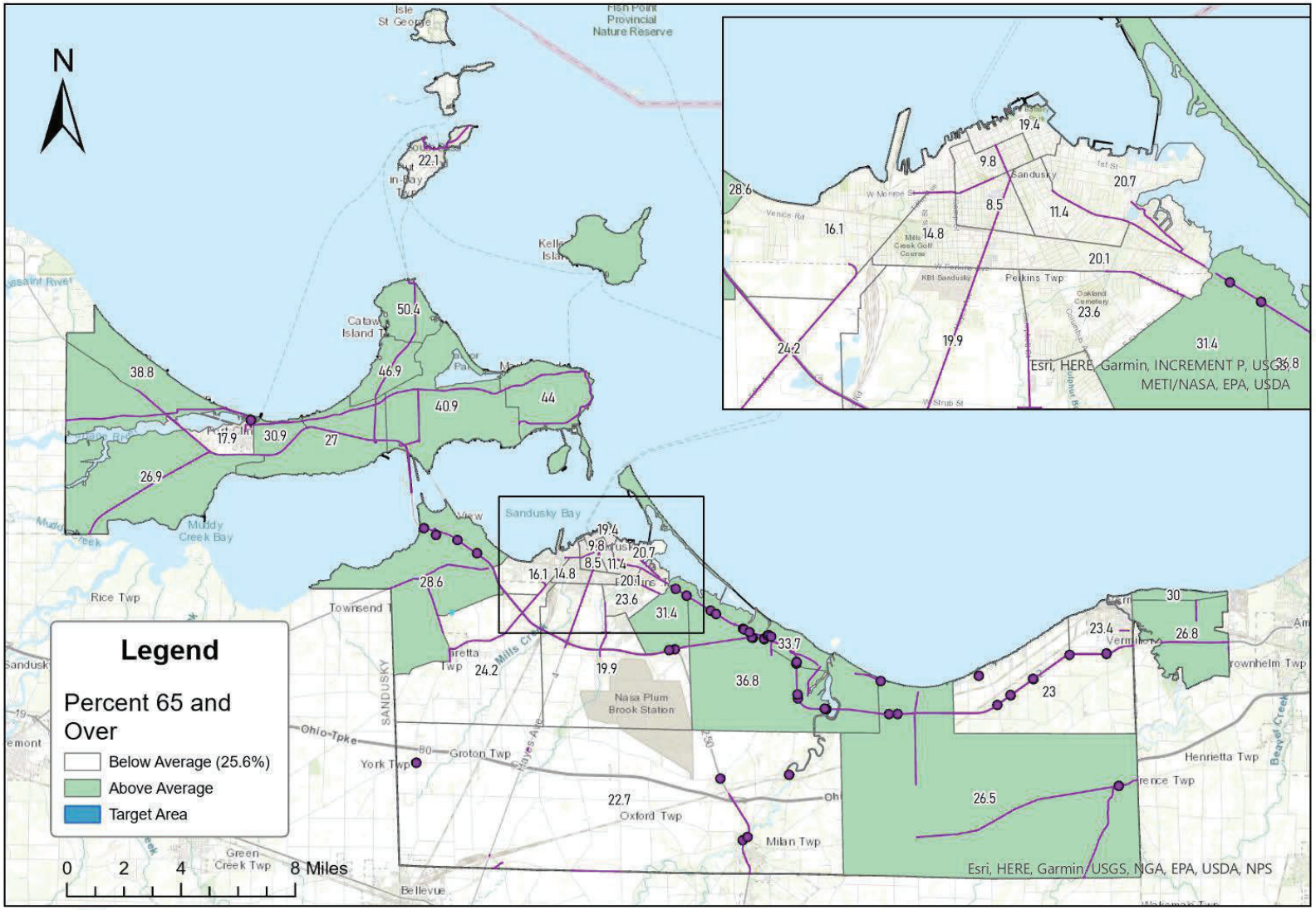
To analyze impacts for the projects in the ERPC MPO region, staff reviewed the projects using the long-range travel demand model for the Sandusky-Port Clinton Urbanized Area that was developed by the

[21] ACS Five Year Language Spoken At Home, 2018
[22] ACS Five Year Language Spoken At Home, 2018

Modeling and Forecasting Section of ODOT's Office of Statewide Planning and Research. The model aided in quantitatively evaluating the effectiveness of the projects and their impact potential to the targeted populations. The MPO region was divided into over 400 traffic analysis zones (TAZs) based on the review of census data, residential patterns, employment, education, recreational locations, and travel characteristics. Travel times were used to analyze the results of project implementation to assess accessibility to the generator zones for both targeted and non-targeted populations. Travel times to identified destinations for eleven traffic analysis zones where poverty, minority, 65 years and older, limited English proficiency, disability, and households with no vehicles available were two times above the county averages were compared against five TAZs within the county averages. Results show an average decrease in travel times (-0.3 minute) for target zones as compared to average travel times for those non-high rate zones. Programmed projects improved travel times for those identified target areas and did not negatively affect the target groups. The total average travel time difference for identified higher rate TAZs and non-identified TAZ areas show an overall decrease of 18 seconds. 82% of projects in the TIP for FY 2024-2027 for the ERPC MPO region can be considered system preservation projects while the other 18% are all projects that include sidewalk installations. Preservation type projects include resurfacing, culvert replacement, signal projects, and overall general maintenance of the transportation system. These types of projects have little or no adverse impact on the population. The factors listed above were considered upon review of the projects to measure the impact upon the targeted areas:

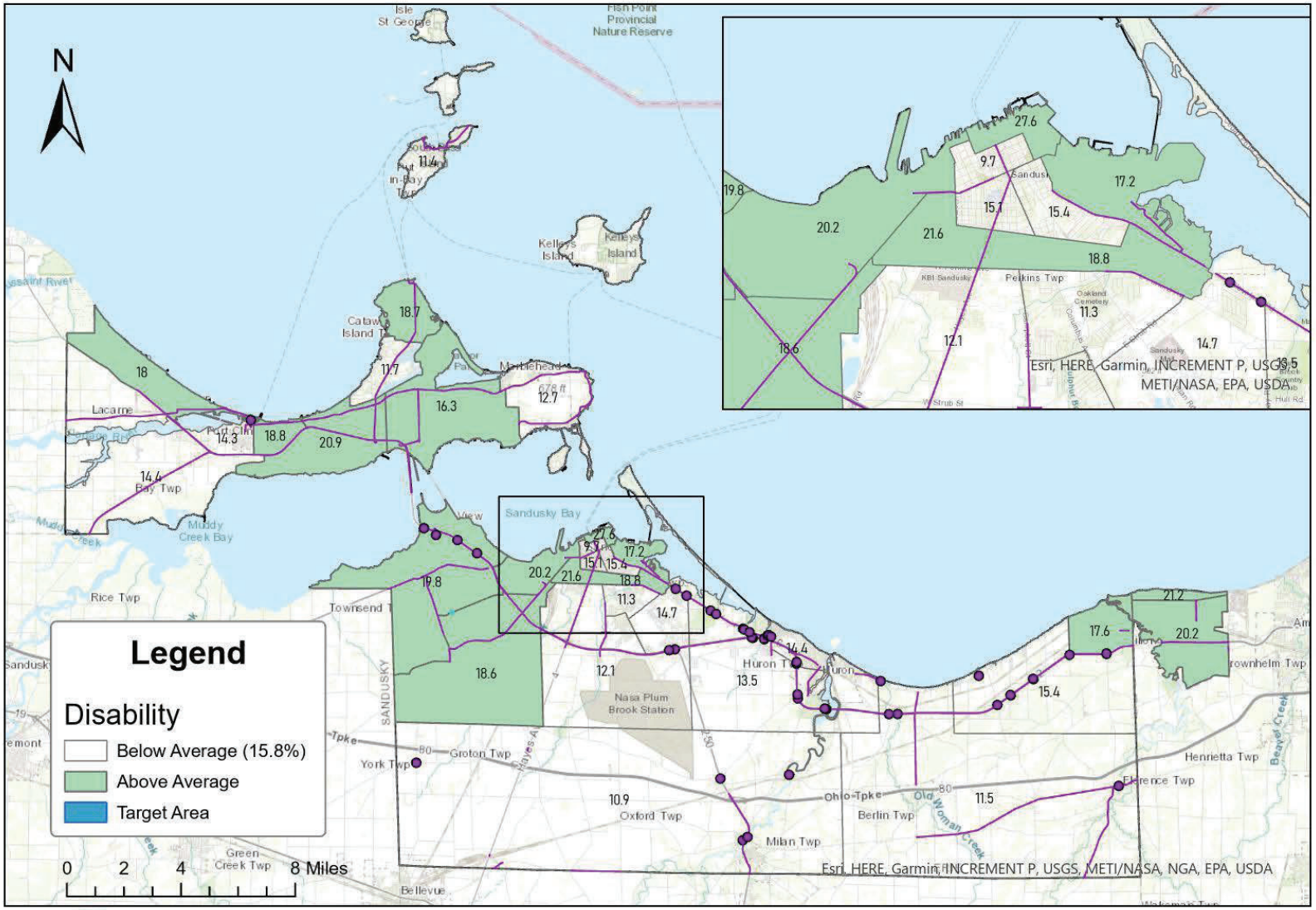
- Bodily impairment, infirmity, illness or death
- Air, noise, and water pollution and soil contamination
- Destruction or disruption of man-made or natural resources
- Destruction or diminution of aesthetic values
- Destruction or disruption of community cohesion
- Destruction or disruption of a community's economic vitality
- Destruction or disruption of the availability of public and private facilities and services
- Vibration
- Adverse employment effects
- Displacement of persons, businesses, farms or nonprofit organizations
- Increased traffic congestion
- Isolation
- Exclusion or separation of minority or low-income individuals within a given community or from the broader community
- The denial of, reduction in, or significant delay in the receipt of, benefits of DOT programs, policies, or activities.

In summary, the MPO is dedicated to identifying any adverse or negative impacts on a population as a result of a project and will consider possible alternatives should a disproportionately high and/or adverse human health or environmental effect be of concern.



Created By:
Erie Regional Planning Commission
Metropolitan Planning Organization
Source: 2023 US Census Bureau 5-Year ACS, ODOT TIMS
December, 2024

Target Area: Population 65 and Over



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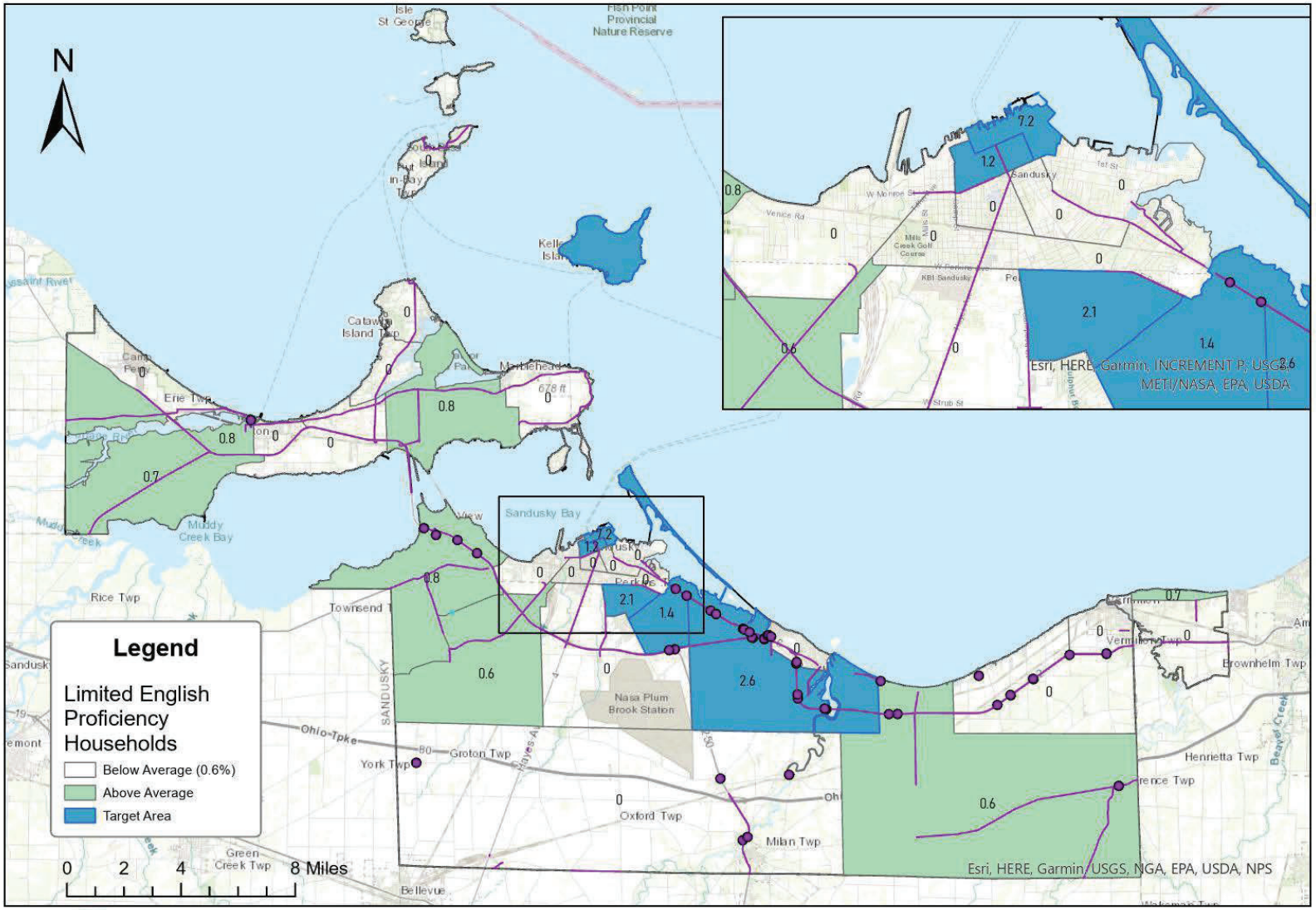
Erie Regional Planning Commission
Metropolitan Planning Organization
Source: 2023 US Census Bureau 5-Year ACS, ODOT TIMS
December, 2024

Target Area: Individuals with Disabilities



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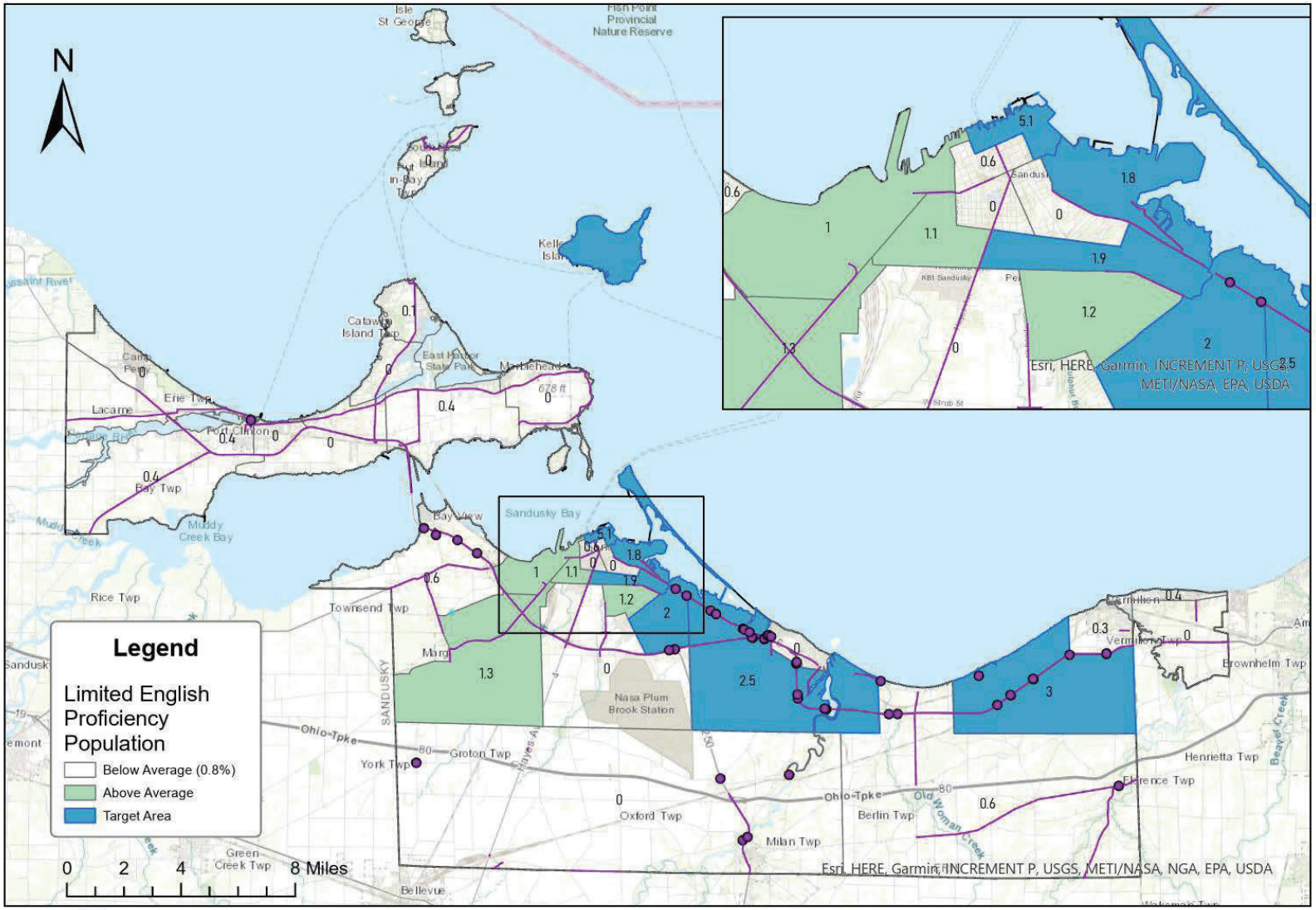
Metropolitan Planning Organization
Source: 2023 US Census Bureau 5-Year ACS, ODOT TIMS
December, 2024

Target Area: LEP - Housholds



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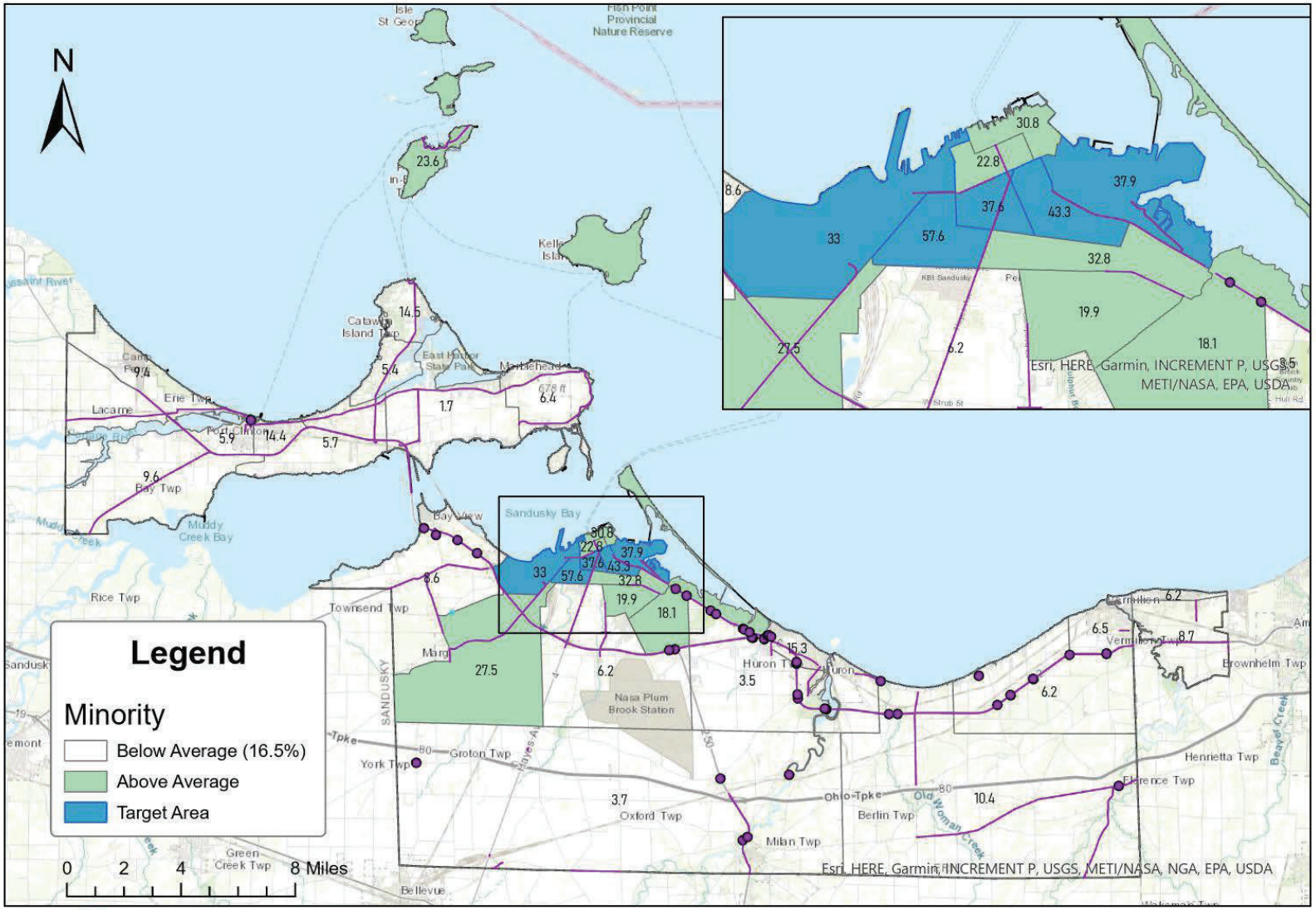
Erie Regional Planning Commission
Metropolitan Planning Organization
Source: 2023 US Census Bureau 5-Year ACS, ODOT TIMS
December, 2024

Target Area: LEP - Population



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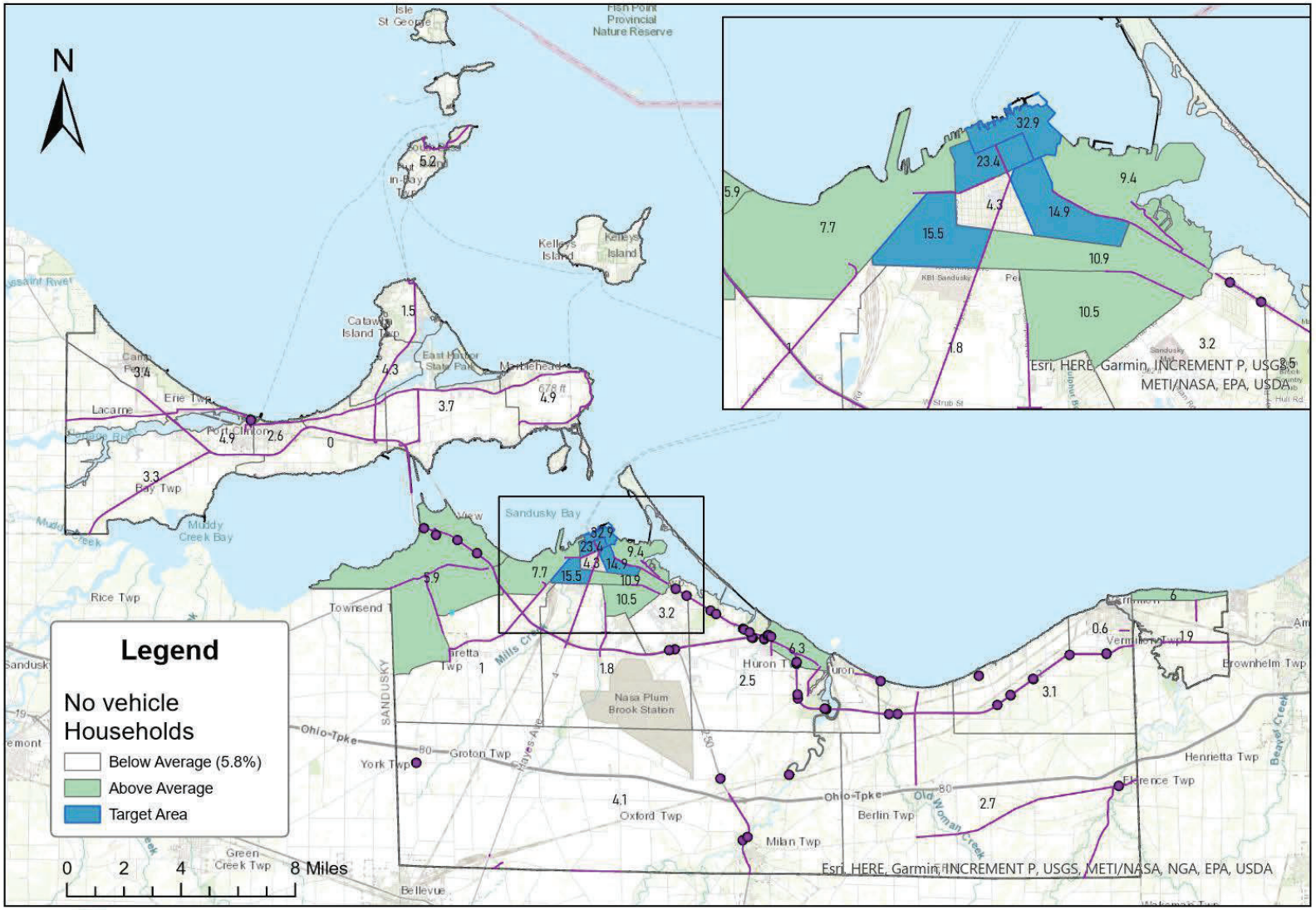
Erie Regional Planning Commission
Metropolitan Planning Organization
Source: 2023 US Census Bureau 5-Year ACS, ODOT TIMS
December, 2024

Target Area: Minority Populations



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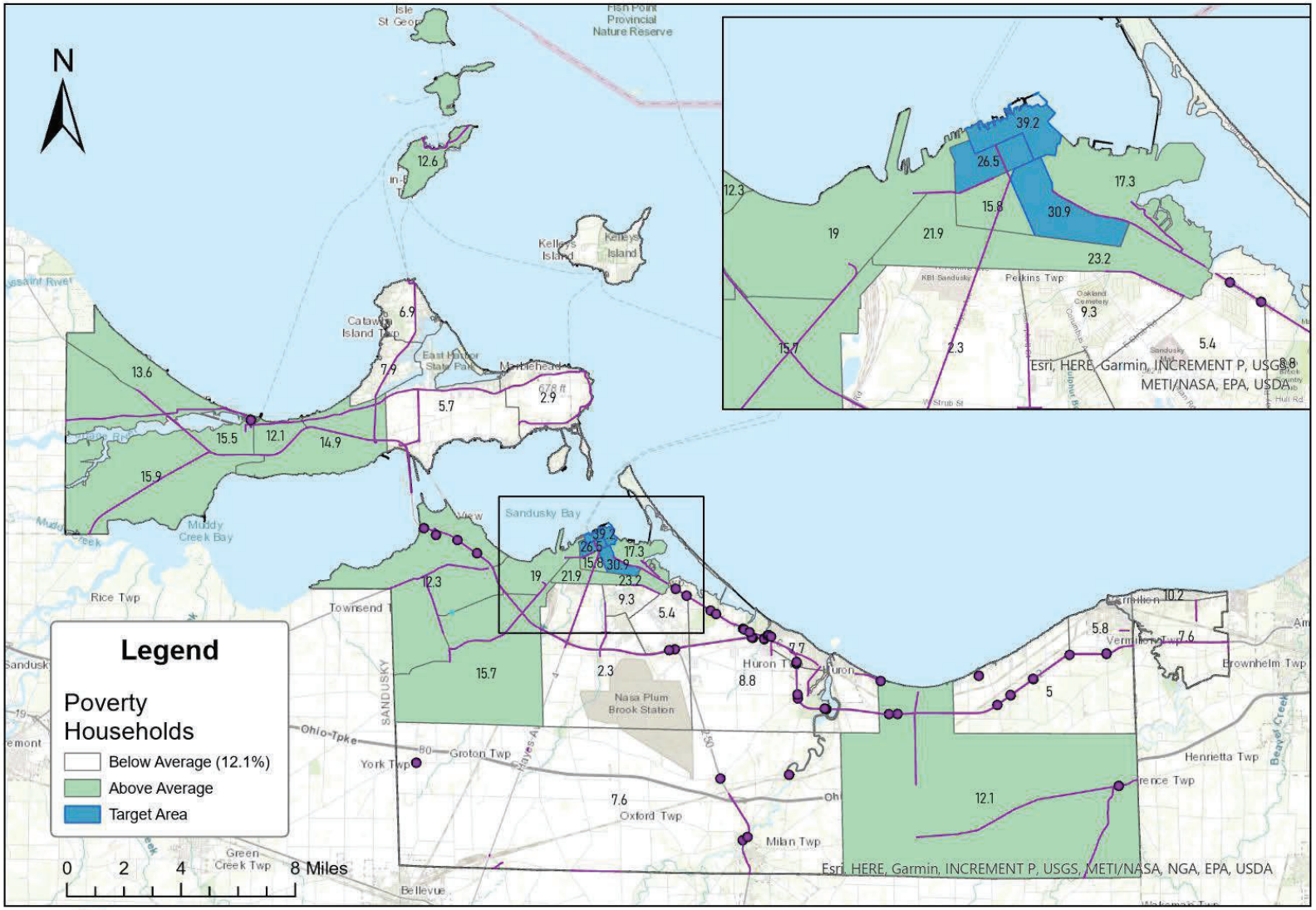
Metropolitan Planning Organization
Source: 2023 US Census Bureau 5-Year ACS, ODOT TIMS
December, 2024

Target Area: No Vehicle Households



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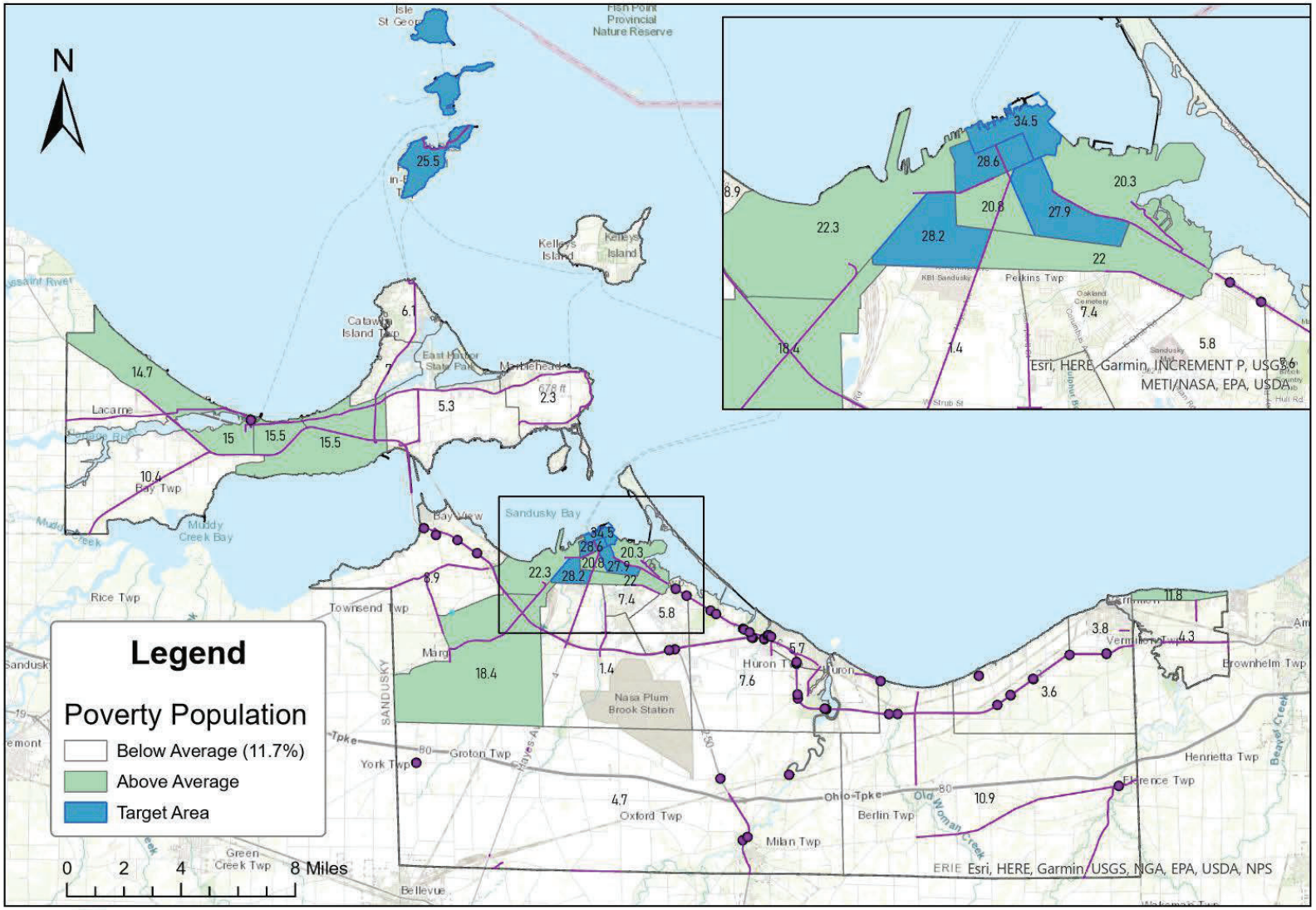
Erie Regional Planning Commission
Metropolitan Planning Organization
Source: 2023 US Census Bureau 5-Year ACS, ODOT TIMS
December, 2024

Target Area: Poverty Households



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Erie Regional Planning Commission
Metropolitan Planning Organization
Source: 2023 US Census Bureau 5-Year ACS, ODOT TIMS
December, 2024

Target Area: Poverty Population

4.3 Economic Conditions

	Millions in Current Dollars		
	Erie	Ottawa	Ohio
2011	4,987	1,792	541,315
2012	5,216	1,921	548,291
2013	5,457	1,950	577,890
2014	5,529	1,872	606,729
2015	4,953	2,042	616,279
2016	5,002	1,992	631,606
2017	5,018	2,101	648,574
2018	5,089	2,114	676,721
2019	4,601	2,221	702,055
2020	4,133	2,137	697,868
2021	4,593	2,394	759,626
2022	5,310	2,483	825,990
2023	5,627	2,723	884,834

Figure 4-3.2: Gross Domestic Product, All Industry Sectors[23]

Tourism: Erie and Ottawa County's location on the southern shores of Lake Erie makes it an attractive destination for both tourists and residents. Lake Erie Shores and Islands is the visitor's bureau in the area and consists of data from multi-communities including Berlin Heights, Castalia, Elmore, Genoa, Huron, Kelley's Island, Marblehead, Middle Bass, Milan, Oak Harbor, Port Clinton/Catawba, Put-In-Bay, Sandusky and Vermilion which collaboratively make up the Lake Erie Shores and Islands. Annually, more than 11 million trips are made to Lake Erie Shores and Islands.[24] In addition, one-third of the total tourism sales in Northwest Ohio ($8.3 billion in 22 counties) are generated in the Lake Erie Shores and Islands region's two counties, Erie and Ottawa.[25]

The region is home to many attractions and recreational opportunities from the city offerings to lakes and rivers. The Lake Erie Islands, via boat, plane or ferry, offer a variety of attractions, including state parks, boutique shops and nightlife, and historic sites such as Perry's Monument on Put-In-Bay and Glacier Grooves on Kelly's Island. Lake Erie's coastline and the park facilities offer natural areas and historic resources for tourists and residents to enjoy. Lake Erie is known for its excellent walleye fishing, and has seen consistent growth in out of state anglers and an increase in licensed carter boat captains. Cedar Point is a premiere amusement park, featuring 17 roller coasters and consistently one of the most visited parks in North America. Kalahari Resort in Sandusky is home to Ohio's largest indoor water park. The 174,000 square foot Kalahari Resort includes a 215,000 square feet convention space as well as 890 rooms. Other attractions in the area include the Great Wolf Lodge, Castaway Bay, Merry-Go-Round Museum, Marblehead Lighthouse, and Sawmill Creek Resort.

SportsForce Park was completed in 2017 and continues to grow. In 2020, the Cedar Point Indoor Sports Complex opened, and features ten full-size basketball courts, which can convert to 20 full-size volleyball courts, a championship arena with retractable seating, sports medicine facility, fitness area, and family activities center, and as of 2023, an E-Sports center that features tournaments and summer camps.[26]

[23] Bureau of Economic Analysis, US Department of Commerce, 6/2024
[24] State of Tourism, 2018 LESI
[25] Economic Impact of Tourism research, 2017
[26] https://www.shoresandislands.com/download/travel-guide accessed 5/2020

Tourists destined for Erie County primarily arrive by automobile as indicated by a survey conducted by Lake Erie Shores and Islands. Other available modes of transportation include rail service to Sandusky provided by Amtrak and bus service provided by Greyhound. According to the Lake Erie Shores and Islands, the top five reasons for visiting Erie County were: the Lake Erie Islands, beaches, lighthouses, historic sites, and Cedar Point. The survey stated that the majority of tourists are between the ages of 35 to 54.[27]

Economic Impact of Tourism in Erie County: Tourism is an integral and driving component for the Erie County economy. There is a diverse composite of economic activities, including transportation, recreation, retail, lodging, and the food and beverage sectors. LESI reported that in 2021 tourists support over 14,008employees creating $394 million in wages and generates over $353 million in state and local taxes. Tourism is an integral and driving component of the both counties economies. Tourism-generated local taxes save Erie County households $4,749 and Ottawa County households $1,629 on average annually.. [28] Historically, manufacturing was a major employer in the area. In the 1980s the Services sector started to dominate the economy (**see Figure 4-2.2**). Currently, the travel and tourism make up 27% of local employment with accommodations and food consisting of almost 15% (**see Figure 4-2.1**).

Travel & Tourism Sectors

	Erie County, OH	Ottawa County, OH
Total Employment, 2022	36,050	13,671
Travel & Tourism Related	~10,278	~3,205
Retail Trade	1,198	~337
Gasoline Stations	482	171
Clothing & Accessory Stores	226	~39
Misc. Store Retailers	490	127
Passenger Transportation	~3	~7
Air Transportation	0	~2
Scenic & Sightseeing Transport	~3	5
Arts, Entertainment, & Recreation	3,776	~677
Performing Arts & Spectator Sports	88	~8
Museums, Parks, & Historic Sites	80	~89
Amusement, Gambling, & Rec.	3,608	580
Accommodation & Food	5,301	2,184
Accommodation	1,623	333
Food Services & Drinking Places	3,678	1,851
Non-Travel & Tourism	25,772	10,466
Percent of Total		
Travel & Tourism Related	~28.5%	~23.4%
Retail Trade	3.3%	~2.5%
Gasoline Stations	1.3%	1.3%
Clothing & Accessory Stores	0.6%	~0.3%
Misc. Store Retailers	1.4%	0.9%
Passenger Transportation	~0.0%	~0.1%
Air Transportation	0.0%	~0.0%
Scenic & Sightseeing Transport	~0.0%	0.0%
Arts, Entertainment, & Recreation	10.5%	~5.0%
Performing Arts & Spectator Sports	0.2%	~0.1%
Museums, Parks, & Historic Sites	0.2%	~0.7%
Amusement, Gambling, & Rec.	10.0%	4.2%
Accommodation & Food	14.7%	16.0%
Accommodation	4.5%	2.4%
Food Services & Drinking Places	10.2%	13.5%
Non-Travel & Tourism	71.5%	76.6%

The major industry categories (retail trade; passenger transportation; arts, entertainment, and recreation; and accommodation and food) in the table above are the sum of the sub-categories underneath them and as shown here do not represent NAICS codes. These data are from the Quarterly Census of Employment and Wages which does not include the self-employed. Estimates for data that were not disclosed are indicated with tildes (~).

Figure 4-3.1: Employment[29]

[27] LESI, 2013 Visitor Survey
[28] State of Tourism, 2018 LESI
[29] Headwater Economics , 5/2020

Change in Erie/Ottawa County Employment: 2001-2024

Description	2001 Jobs - Erie County	2024 Jobs - Erie County	2001 Jobs - Ottawa County	2024 Jobs - Ottawa County	2021 Total Jobs	2024 Total Jobs	2001-2024 % Change
Manufacturing	9,157	5,302	2,837	2,195	11,994	7,497	-37%
Government	5,939	5,155	2,461	2,466	8,400	7,621	-9%
Retail Trade	4,939	5,080	2,297	1,656	7,236	6,736	-7%
Health Care and Social Assistance	4,579	4,653	1,297	1,699	5,876	6,352	8%
Accommodation and Food Services	4,476	5,487	2,030	2,336	6,506	7,823	20%
Arts, Entertainment, and Recreation	2,922	4,157	632	780	3,554	4,937	39%
Other Services (except Public Administration)	2,436	1,447	1,095	862	3,531	2,309	-35%
Construction	1,786	1,396	830	994	2,616	2,390	-9%
Wholesale Trade	1,439	1,082	239	193	1,678	1,275	-24%
Administrative and Support and Waste Management and Remediation Services	981	878	365	365	1,346	1,243	-8%
Transportation and Warehousing	893	847	633	524	1,526	1,371	-10%
Finance and Insurance	775	851	392	337	1,167	1,188	2%
Professional, Scientific, and Technical Services	702	824	271	307	973	1,131	16%
Agriculture, Forestry, Fishing and Hunting	564	1,268	455	190	1,019	1,458	43%
Information	542	339	145	50	687	389	-43%
Real Estate and Rental and Leasing	414	400	244	218	658	618	-6%
Educational Services	337	333	85	141	422	474	12%
Utilities	209	80	869	581	1,078	661	-39%
Mining, Quarrying, and Oil and Gas Extraction	165	85	116	108	281	193	-31%
Management of Companies and Enterprises	35	272	46	21	81	293	264%
Unclassified Industry	16	<10	<10	<10	16	<10	Insf. Data
Total	43,305	39,946	39,946	39,946	83,251	79,892	-4%

Figure 4-3.3: Changes in Employment: 2001-2024[30]

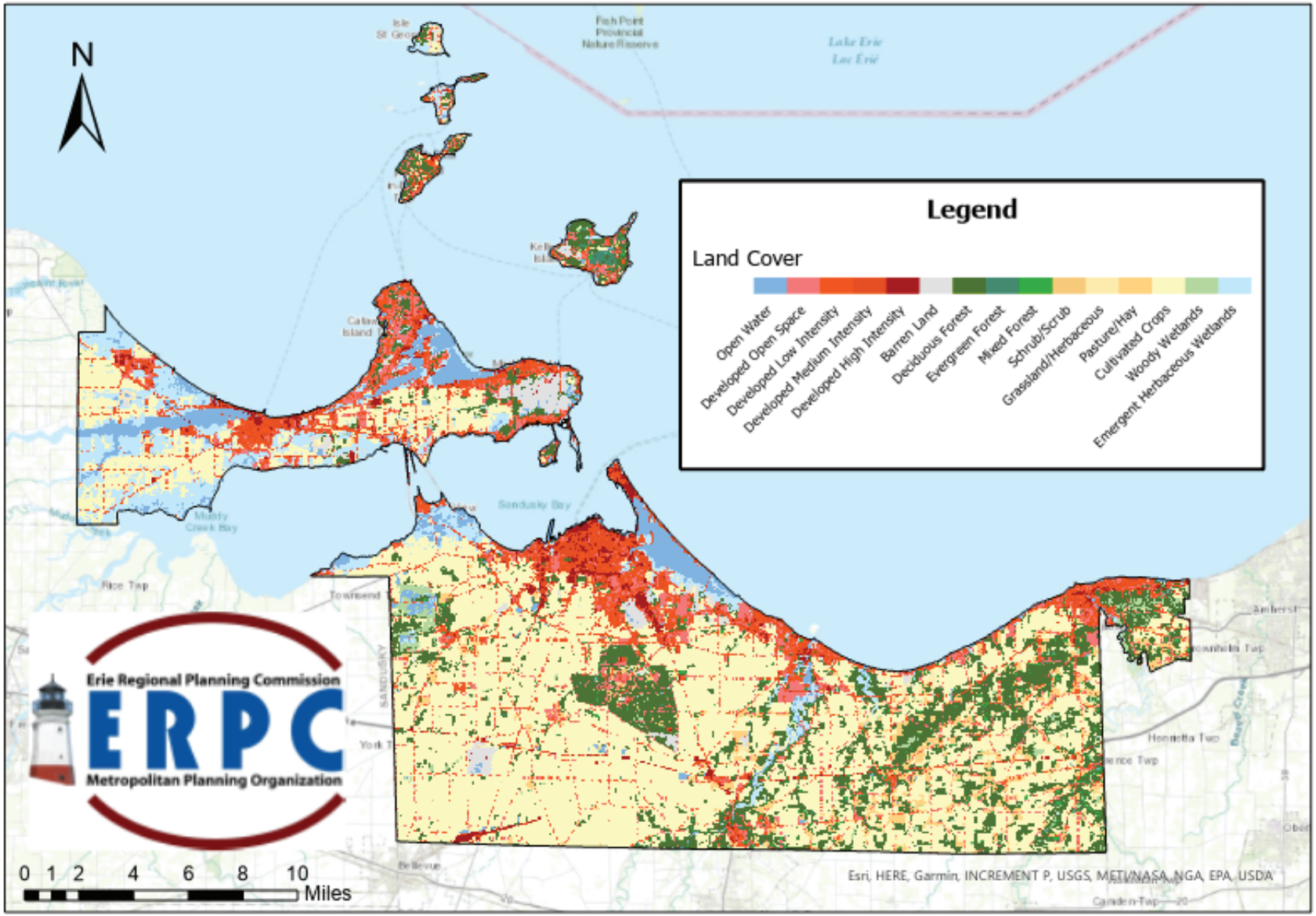
[30] Erie County Economic Development Corporation

Change in Erie/Ottawa County Employment: 2024-2034

Description	2024 Jobs - Erie County	2034 Jobs - Erie County	2024 Jobs - Ottawa County	2034 Jobs - Ottawa County	2024 Total Jobs	2034 Total Jobs	2024-2034 % Change
Accommodation and Food Services	5,487	5,233	2,336	2,348	7,822	7,581	-3.1%
Manufacturing	5,302	4,818	2,195	2,314	7,497	7,132	-4.9%
Government	5,155	4,998	2,466	2,511	7,621	7,508	-1.5%
Retail Trade	5,080	5,229	1,656	1,702	6,735	6,931	2.9%
Health Care and Social Assistance	4,653	4,525	1,699	1,758	6,352	6,283	-1.1%
Arts, Entertainment, and Recreation	4,157	4,384	780	821	4,938	5,206	5.4%
Other Services (except Public Administration)	1,447	1,431	862	958	2,308	2,388	3.5%
Construction	1,396	1,318	994	1,050	2,390	2,368	-0.9%
Agriculture, Forestry, Fishing and Hunting	1,268	1,478	190	136	1,458	1,615	10.8%
Wholesale Trade	1,082	1,061	193	184	1,275	1,244	-2.4%
Administrative and Support and Waste Management	878	730	365	381	1,244	1,111	-10.7%
Finance and Insurance	851	984	337	351	1,187	1,335	12.4%
Transportation and Warehousing	847	820	524	511	1,371	1,331	-2.9%
Professional, Scientific, and Technical Services	824	874	307	319	1,132	1,193	5.5%
Real Estate and Rental and Leasing	400	413	218	217	618	630	2.0%
Information	339	363	50	69	389	432	11.1%
Educational Services	333	311	141	212	474	523	10.2%
Management of Companies and Enterprises	272	307	21	24	293	331	13.0%
Mining, Quarrying, and Oil and Gas Extraction	85	88	108	109	193	197	2.0%
Utilities	80	79	581	574	661	653	-1.1%
Unclassified Industry	<10	17	<10	<10	<10	17	Insf. Data
Totals	39937	39460	16021	16550	55958	56009	0.1%

Figure 4-3.3: Changes in Employment: 2024-2034[31]

[31] Erie County Economic Development Corporation



Map prepared by Erie Regional Planning Commission, and is intended for illustrative purposes only. Erie County, Ohio assumes no responsibility or liabilities for any errors or omissions contained here in.

Figure 4-3.3 Existing Land Cover

ERPC MPO 2050 Long Range Transportation Plan

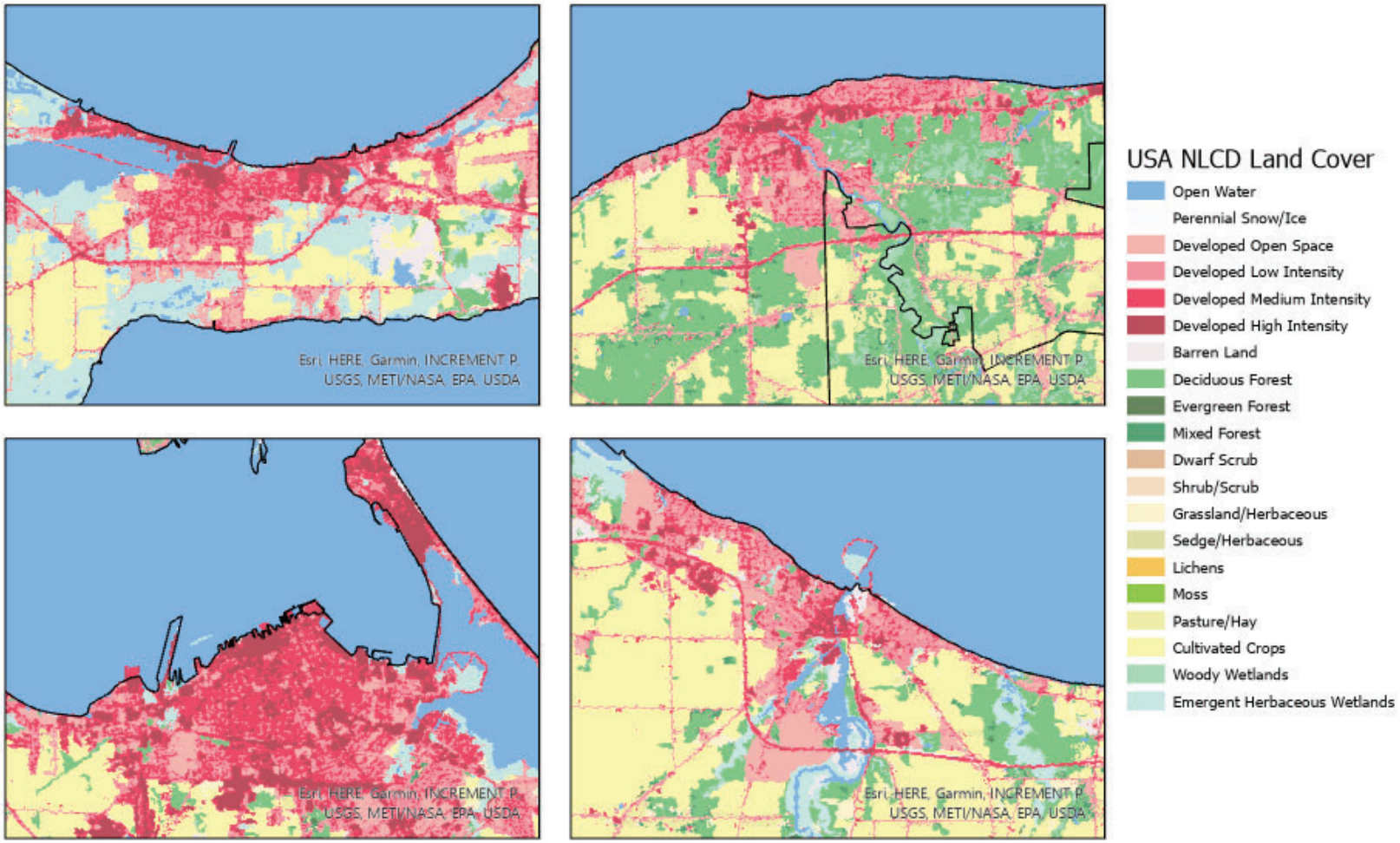


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Figure 4-3.3 Existing Land Cover

ERPC MPO 2050 Long Range Transportation Plan

Land Use, Ownership, and Agriculture: The majority of the planning area consists of privately held land (95%) with the state owning a small portion (approximately 2.4%) (**see Figures 4-3.5**). The majority of the land is made up of mixed cropland (57%) and urban areas (17%). (4%) (**see Figure 4-3.7**). The region has seen a consistent growth un urban, suburban and exurban residential development acres since 2000.[32] Farming is prevalent in the region with oilseed and grain being the most common crops followed by aquaculture and numerous fruit farmers (**see Figures 4-3.8 and .9**).

Land Ownership

	Erie County, OH	Ottawa County, OH
Total Acres*	160,559	160,503
Private Lands	154,106	151,984
Conservation Easement	959	1,290
Federal Lands	0	4,618
Forest Service	0	0
BLM	0	0
National Park Service	0	23
USFWS	0	4,028
Military	0	567
Other Federal	0	0
State Lands	3,993	3,632
State Trust Lands*	0	0
Other State	3,993	3,632
Tribal Lands	0	0
City, County, Other	2,460	269
Percent of Total		
Private Lands	96.0%	94.7%
Conservation Easement	0.6%	0.8%
Federal Lands	0.0%	2.9%
Forest Service	0.0%	0.0%
BLM	0.0%	0.0%
National Park Service	0.0%	0.0%
USFWS	0.0%	2.5%
Military	0.0%	0.4%
Other Federal	0.0%	0.0%
State Lands	2.5%	2.3%
State Trust Lands**	0.0%	0.0%
Other State	2.5%	2.3%
Tribal Lands	0.0%	0.0%
City, County, Other	1.5%	0.2%

* Does not include most water.

** Most state trust lands are held in trust for designated beneficiaries, principally public schools. Managers may lease and sell these lands for a diverse range of uses to generate revenues for the beneficiaries.

Figure 4-3.5: Land Types[33]

Number and Size of Farms

	Erie County, OH	Ottawa County, OH
Number of Farms, 2022	317	590
Land in Farms (Acres), 2022	77,157	119,544
Average Farm Size (Acres)	243	203
Approximate Land Area (Acres)	160,954	163,112
Approximate Percent of Land Area in Farms	47.9%	73.3%

Figure 4-3.7: Farms [34]

[32] Headwater Economics, 5/2020
[33] Headwater Economics, 5/2020

Forest, Grassland, and Other Land Cover

	Erie County, OH	Ottawa County, OH
Total Acres (2019*)	160,559	160,503
Forest	28,549	5,479
Grassland	1,731	2,539
Shrubland	188	53
Mixed Cropland	89,140	95,648
Water	4,080	8,617
Urban	29,835	24,814
Other	7,036	23,354
Percent of Total		
Forest	17.8%	3.4%
Grassland	1.1%	1.6%
Shrubland	0.1%	0.0%
Mixed Cropland	55.5%	59.6%
Water	2.5%	5.4%
Urban	18.6%	15.5%
Other	4.4%	14.6%

Figure 4-3.6: Land Types[35]

Types of Farms

	Erie County, OH	Ottawa County, OH
All Farms, 2022	317	590
Oilseed & Grain Farming	151	318
Vegetable & Melon Farming	10	7
Fruit & Nut Tree Farming	25	20
Greenhouse, Nursery, etc.	19	7
Other Crop Farming	33	171
Beef Cattle Ranch. & Farm.	15	14
Cattle Feedlots	3	3
Dairy Cattle & Milk Prod.	0	0
Hog & Pig Farming	1	0
Poultry & Egg Production	13	9
Sheep & Goat Farming	12	9
Animal Aquaculture & Other Animal Prod.	35	32
Percent of Total		
Oilseed & Grain Farming	47.6%	53.9%
Vegetable & Melon Farming	3.2%	1.2%
Fruit & Nut Tree Farming	7.9%	3.4%
Greenhouse, Nursery, etc.	6.0%	1.2%
Other Crop Farming	10.4%	29.0%
Beef Cattle Ranch. & Farm.	4.7%	2.4%
Cattle Feedlots	0.9%	0.5%
Dairy Cattle & Milk Prod.	0.0%	0.0%
Hog & Pig Farming	0.3%	0.0%
Poultry & Egg Production	4.1%	1.5%
Sheep & Goat Farming	3.8%	1.5%
Aquaculture & Other Prod.	11.0%	5.4%

Figure 4-3.8: Farms Types [36]

[34] Headwater Economics, 5/2020
[35] Headwater Economics, 5/2020
[36] Headwater Economics, 5/2020

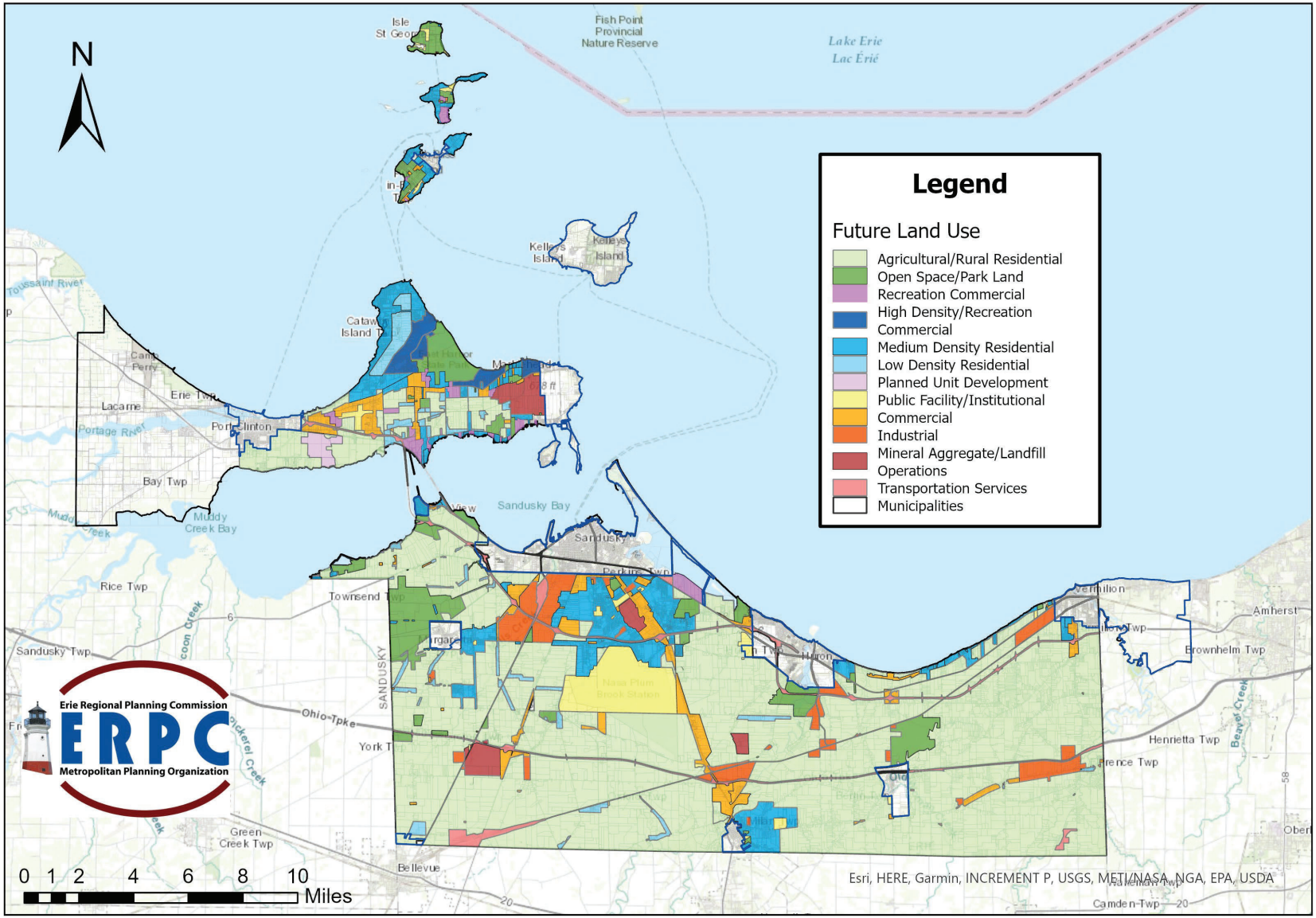

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Figure 4-3.9 Future Land Use Map

ERPC MPO 2050 Long Range Transportation Plan

Local Land Use: Land use descriptions from the major urban areas in the planning area are described below.

City of Huron: Major land use clusters consists of residential, commercial, industrial, and open space.

- **Residential land** use primarily **extends east and west along the coast**, **north of US 6,** and along **Main Street**.

- **Commercial** areas are located along **Cleveland Road**, including the Commercial Plaza Shopping Center located at the intersection with **Berlin Road**, and along **Rye Beach Road** from Bogart Road to Cleveland Road.

- **Industrial areas** are located west of the **central business district** in the city and the southeast portion of the city east of **River Road** and north of **Sprowl Road** extending to the lakefront. The **Sawmill Industrial park** and **Huron Corporate Park** are located west of the city on the north side and south side of the railroad tracks, respectively.

- **Major open spaces** include **the Huron Boat Basin, Nickel Plate and Lake Front Beach,** and **Fabens Park**. **Sheldon's Marsh** is located west of the city and **Old Woman's Creek National Estuarine Preserve** to the east. **Thunderbird Golf Course** is in the township adjacent the city.

- **Major approaches include Cleveland Road (US 6), SR 2, Berlin Road, SR 13,** and **Huron-Avery Road**. In addition, two railways run east-west and north-south through Huron.

- **Major activity centers** include **the waterfront** and the shops and restaurants along **Main Street** beginning at US 6 and continuing north along the Huron River.

Perkins Township: Major land use clusters of residential, commercial, and industrial development.

- Generally, the **commercial/retail** development of the township is concentrated along **Perkins Avenue** and **US 250 (Milan Road**).

- **Commercial development areas** were identified on **Hayes Avenue and Old Railroad Road** on the west side of the township, on **Columbus Avenue** immediately **north of SR 2** and along **Perkins Avenue**.

- Central Perkins Township primarily features a large number **Institutional land uses.** The eastern half of the **Columbus Avenue** corridor is home to township and county offices, the Erie County Fairgrounds and Sandusky Cemetery, as well as the Ohio Army National Guard Recruiting Center and Ohio Veterans Home bordering **Strub Road** and **Columbus Avenue.**

- South of **Strub Road** is the **industrial** Wagner Quarry, separating the township from residential land uses on its west end and US 250 commercial corridor to the east..

- The township is largely **residential** between **Campbell Road** and **Columbus Avenue** and the far eastern portion of **Perkins Avenue**. The portion of the township **south of SR 2** is a mixture of single-family development, NASA Plumbrook, and agricultural or undeveloped lands except for US 250.

- **Major approaches/corridors** include **SR 6, SR 4, SR 2, Perkins Avenue**, and **Columbus Avenue**.

- **Entry points** are located off of **SR 2** at **US 250** and **SR 4.**

  -US 250 is the commercial focal point of Erie County. Located between SR 2 and Perkins Avenue it is a **regional shopping center** as well as **strip commercial development**. Traffic on the US 250 Corridor includes a mix of traffic that requires the roadway to serve multiple purposes. The mix of traffic includes the following: A large influx of seasonal **tourist traffic**; local traffic from residential/retail/commercial areas; Commercial traffic from the quarry; traffic from a multitude of businesses; and pedestrian/bicycle traffic.

  -The second major access to Perkins Township is **SR 4** (Hayes Avenue) at SR 2. **Hayes Avenue** has become a health care corridor.

- **Major activity centers** are as follows:

  - Along **US 250** there is a major commercial development, and several hotels including **Great Wolf Lodge** and Water Park, **Sandusky Mall**, **Lakecrest Shopping Center**, **Park Place Center**, Outback Plaza, the **Crossings Plaza** and Meijers Center. Government facilities include the **Ohio Soldier's and Sailor's Home**, **Township Fire Station,** and recreation facilities consisting of Pelton Park. **Perkins Plaza** east of US 250 is also developed as a commercial area. **Kalahari Water Park** is located near the southeastern edge of the township.

  -SR 4/Hayes Avenue consists of a multitude of **commercial and health care businesses**.

  -Campbell Street includes government, school, and commercial facilities. **Thorworks** is located off the northern portion of Campbell Street.

  -Perkins Avenue east of the SR 4 has a variety of commercial businesses. The **Perkins Plaza** is located on the south side of Perkins Avenue near Columbus Avenue.

City of Port Clinton: Major land use clusters consists of residential, commercial, industrial, and open space.

• **Residential land** use primarily occurs south of the railroad tracks that bisect the city from east to west, and east along **Perry, Second and Third Street**.

• **Commercial** areas are located east along **Perry Street**, including the Port Clinton Plaza Shopping Center. The **Central Business District** is along **Madison and Jefferson Street** in the city center north of the railroad tracks. The city north of the **Portage River** is primarily marinas with commercial businesses catering to Lake Erie services.

• **Industrial areas** are located on the east end of the city along **Buckeye Boulevard.** Additional heavy manufacturing is along the south side of the Portage River on the cities west end. The **Lake Erie Business Park** is 6 miles northwest of the city and provides major manufacturing.

• The cities position along the **Portage River** and **Lake Erie** includes increased access to **Major Open Space,** including at the **Waterworks Park in Perry Street** and numerous marinas along the Portage River.

• **State Route 2 and State Route 53** bypasses the city along the south, providing major access points at the cities east and west ends. **State Route 163** runs along the coast east to west along the front of the city.

• **Major activity centers** include **the waterfront** and the shops and restaurants along **Madison Street** beginning at State Route 163.

City of Sandusky: Major land use clusters in the city consist of residential, commercial, industrial, and open space. Residential land uses to encompass the largest percentage of the city's area.

- A majority of the **residential land use** is concentrated within a mile of the **Sandusky's central business district,** on the **west side** of the city and **north of Perkins Avenue** on the eastern half.

- **Major open space** is located through the western area of the city at **Mills Creek Golf Course** and along **Sandusky Bay**. There are numerous parks located throughout the city with the largest being **Shoreline Park**, **Battery,** and **Lions Park** in addition to **the Boat Marina** and **Jackson Street Pier**.

- **Commercial development** is concentrated around three areas: the downtown **central business district;** along **US 250** starting at the overpass; and along **Perkins Avenue** from Mills Street to US 250. Additional commercial corridors are on both the east and west ends of the city on **Cleveland Road/US 6**.

- **Industrial clusters** are concentrated along the **western waterfront** and along the western portion of US 6 including **Venice Road** and along the railroad that traverses the city. There is

also an industrial park located south of Venice Road. **First Street** on the east side also has a cluster.

- **Major activity centers** include **Cedar Point Amusement park**, **waterfront,** and **central business district**, Firelands Community Hospital, **Jackson Street Pier,** and the Sandusky Plaza.

- **Major approaches** include **Cleveland Road/Venice Road (US 6), Columbus Avenue, Hayes Avenue (SR 4**), and **Milan Road (US 250)**. Two railways run east-west and north-south through Sandusky.

- **Key entry points** are located at the intersections of **Cleveland Road (US 6)** at the City Limits, **Columbus Avenue** and **Perkins Avenue**, **Fremont Avenue (US 6) and SR 2**, **Hayes Avenue (SR 4)** and **Perkins Avenue**, V**enice Road (US 6)** and **Tiffin Avenue (SR 101)** and **Tiffin Avenue (SR 10**1) at the City Limits.

City of Vermilion: Major land use clusters consist of residential, commercial, industrial, and open space.

- **Residential land use** primarily extends **east and west along the coast** and on the **western side** of the city west of the river. Future residential development has been discussed in the southeastern portion of the City and on the southwest end in Vermilion Township north of State Route 2.

- M**ajor approaches** include **US 6, SR 2,** and **SR 60**. In addition, two railways run east-west through the city.

- **Commercial** areas are primarily located along **US 6/Liberty Avenue** and **SR 60**.

- **SR 60** has developed with a **mixed-use of residential/commercial** north of SR 2 and **farmland/residential south** of SR 2**. Sailorway Campus** is also located off SR 60. A large portion of this development is located in **Vermilion Township**.

- **Industrial** areas are clustered towards the **east end of the city.** There is an industrial park located off **Sunnyside Road** on the east end of the city.

- **Open spaces** include **Sherod Park, Main Street Beach, Showse Park** located along the lakefront**, Exchange Park** and **Victory Park (located** off Main Street**), a pocket park (located** off Liberty Avenue), and **agricultural land** in the southeastern portion of the city.

4.4 A Glimpse Into the Year 2050

Population and Households: By the year 2050, the Ohio Department of Development projects that both Erie County and Ottawa County will see declining populations. This assumption is based on the loss of manufacturing jobs in the region, which will minimize in-migration while maximizing out-

migration to areas with job growth. The planning area currently has a large population reaching retirement age with a smaller younger population beneath it. By 2050 this difference will be even more evident. From 2010 to 2022, the median age of Erie County residents has already increased by 2.3 years to 44.8 years, and Ottawa County has seen a larger increase at 4.5 years to 49.8 years. Statewide, since 2010 the median age has increased to 39.6 years (**see Figure 4-4.1**). Ohio is projected to continue experiencing a decline in population, with a composition of residents that is shifting older, and the ERPC MPO planning area outpaces the statewide projections for aging population. Projections range for 65 and over populations between 24-26% in 2050, versus an 18% estimated population statewide,[insert Miami citation,] with Ottawa County home to the highest percentage of people over the age of 60 in the state of Ohio. The age of both counties is in part due to large out-migration due to slowed job growth in the manufacturing sector, along with the regions prominence as a retirement destination due to desirable amenities and communities along Lake Erie. In the future, the transportation system will have many of its users coming from an older demographic and will require a different approach then what has traditionally been done in the past. (**see Figure 4-4.2**).

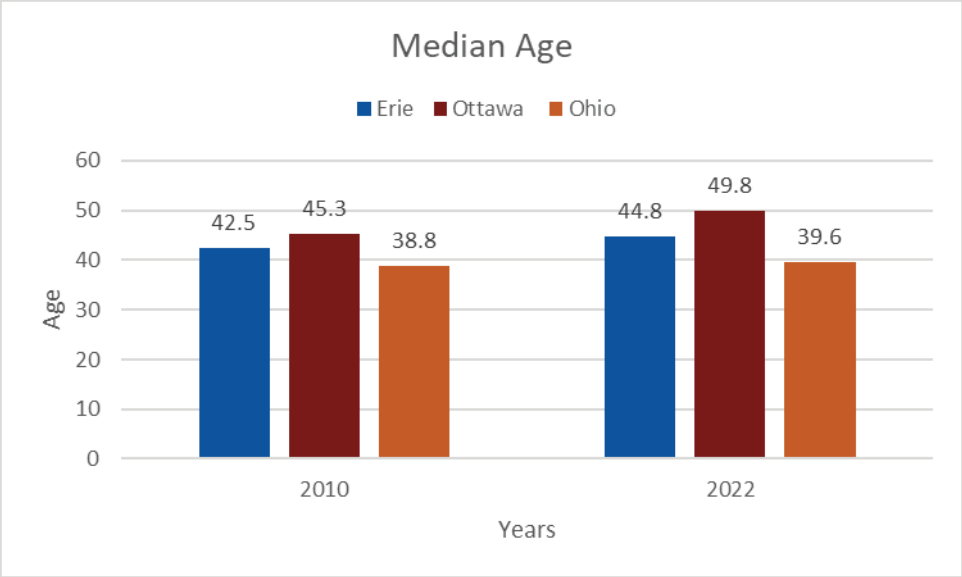


Figure 4-4.1: Median Ages[37]

[37] Headwater Economics, 5/2020

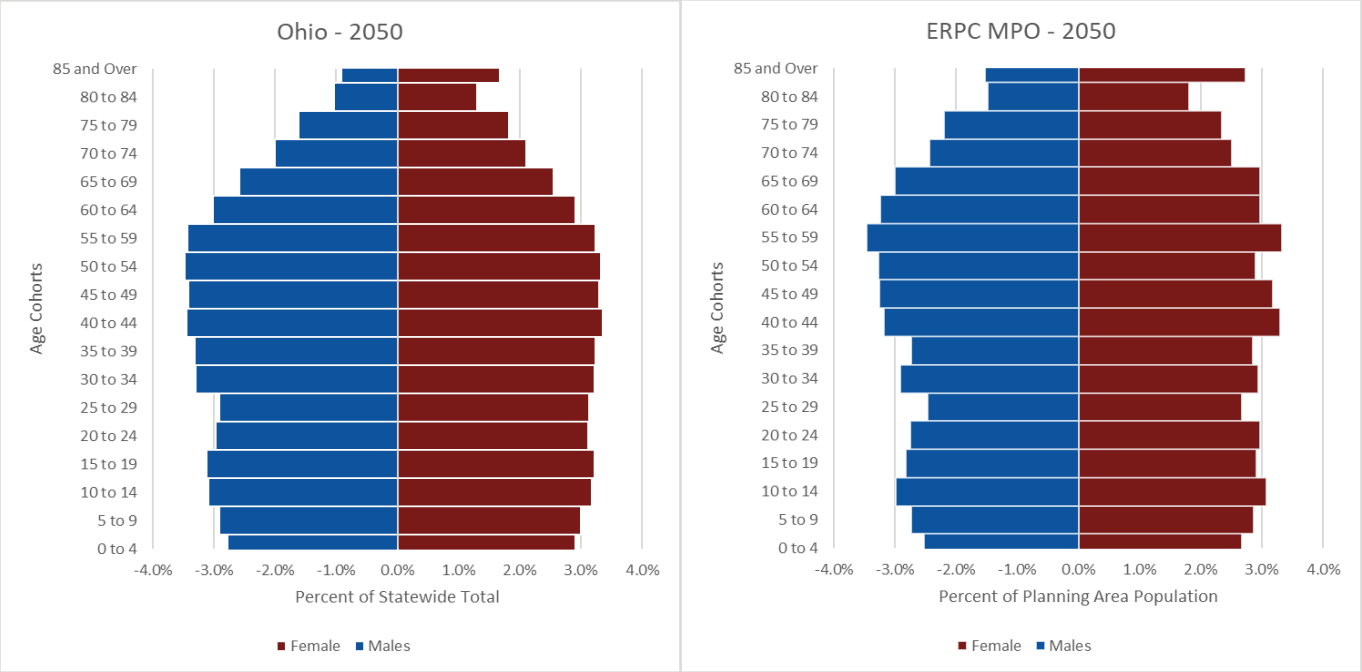


Figure 4-4.2: 2050 Population Pyramids Projection Erie County (left) and Ohio (right)

Elderly Population: While limited population growth is projected for Erie County, several different services will emerge as a result of an aging population. It is important to remember that many older adults live active lives, are safe drivers, and can use public transit. There is no universally accepted age at which people are no longer safe drivers, even though chronic conditions and disability, which occur more frequently in old age, certainly impact that skill. Accessible transportation services are critical for enabling older adults to live independently. The vast majority of older adults, nearly 90%, according to AARP – choose to age in place in their homes and communities. Successful community living requires access to medical and other essential services. While the health impact of reduced access to needed medical services is obvious (missed appointments, emergency hospital visits, lack of continual care), social isolation due to lack of transportation can also have an equally negative effect on health and mental health. Without accessible, reliable, and affordable transportation, many older adults could face the possibility of placement in a long-term care facility.[38]

Erie County is fortunate to have the **Sandusky Transit System** which provides many of the needed services for a reduced rate for applicable seniors.[39] Besides **Serving Ours Seniors**, a private, non-profit, geriatric social service agency funded through the Erie County Senior Services tax levy, volunteers and donations assist local seniors with staying healthy, obtaining food, and medicine, paying utility costs and obtaining transportation. [40] The **Ottawa County Transit Authority (OCTA)** provides curb-to-curb service on a reservation basis to help cover county transportation needs, including reduced fares for seniors in the county. Across the planning area, it is anticipated that ridership numbers, and those seeking Serving Our Seniors services, will continue to climb as the population ages. In addition, best practices in planning and design is changing versus historic patterns of development, where policies encouraging complete streets and protections for vulnerable road

[38] https://www.nadtc.org/about/transportation-aging-disability/unique-issues-related-to-older-adults-and-transportation/ accessed 5/20
[39] http://www.ci.sandusky.oh.us/residents/sandusky_transit_system/index.php accessed 5/20
[40] http://www.servingourseniors.org/about/history/ accessed 5/20

users are increasing transportation options, improving health outcomes and lowering financial burdens that seniors can be adversely affected by.

Some options to assist seniors with staying mobile and having the ability to age in place locally include:

Sandusky Transit System's Fixed Routes: Six different routes run seven days a week in the City of Sandusky and Perkins Township.

Ottawa County Transportation Authority Dial-A-Ride: A curb-to-curb service at an agreed-upon time.

Sandusky Transit System's Dial-a-ride: A curb-to-curb service at an agreed-upon time.

Volunteer transportation programs: Through Serving Our Seniors and through GoOhio ride share[41] which is not active in the planning area, but in the adjoining counties.

Assisted transportation: A service used by older adults who need more than a ride, assisting the door to the car or an "escort" to stay with them throughout the trip.[42] The Sandusky Transit System provides paratransit services to qualified individuals for those who live near a fixed route, but cannot physically access it. Drivers also assist riders onto the bus when needed and attendants ride free.

[41] https://gohiocommute.com/#/ accessed 5/20
[42] http://trimet.org/pdfs/publications/elderly-and-disabled-plan.pdf, 2012 accessed 5/20

Chapter 5. Existing Transportation System Conditions

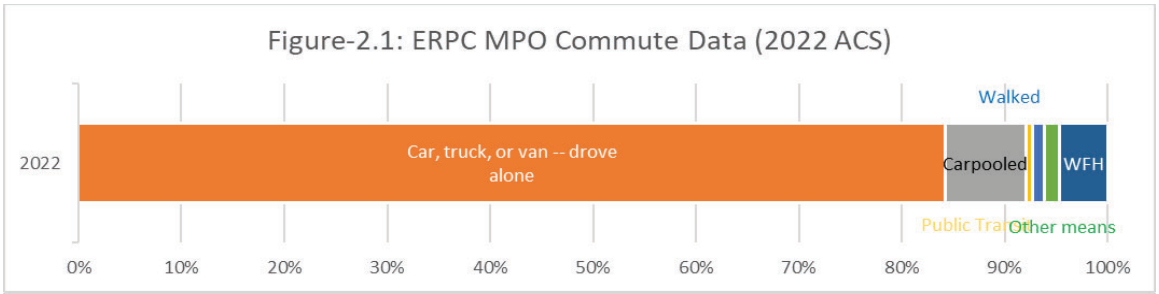
5.1 Overview

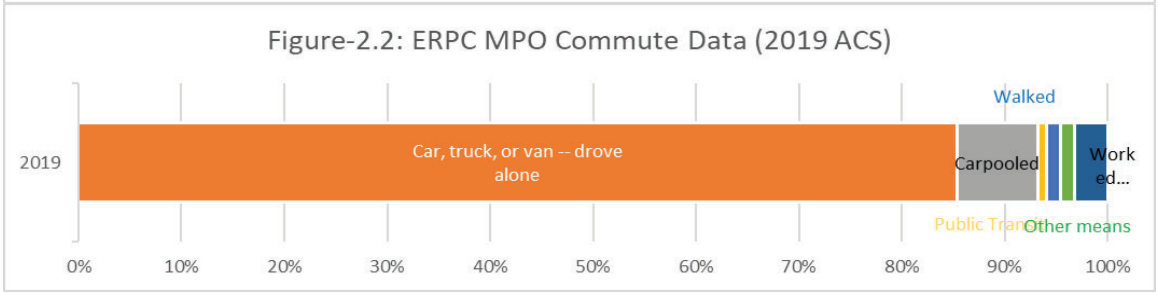
This chapter summarizes the existing transportation conditions within the MPO area. It includes an evaluation of individual transportation modes and explores their interaction and connectivity with the surrounding land uses and environment. The analysis of existing conditions is a "snapshot" of a place and time that is continually changing due to new policies and/or development. This "snapshot" of the current system is important to planning efforts as it is used to forecast future conditions (explored in **Chapter 7**).

5.2 Travel Behavior Summary

Travel Behavior: An analysis of people's travel patterns and behaviors are essential to understanding how the transportation system is used. Across the MPO, traffic patterns differ depending on the time of year as the tourism industry is heavily rooted in the area. The region's traffic flows and travel patterns fluctuate substantially between peak (summer) and non-peak (winter) tourist seasons. With the introduction of new year- round tourist attractions, the area may experience a transition to a more stable transportation system.

Commuter Mode Choice: As of the 2018-2022 American Community Survey (ACS), 84.2% of respondents in planning area drove alone in a private vehicle for their work commute, while 7.8% reported carpooling. Less than 1% (0.6%) reported using public transportation for their commute, while 1.2% reported walking to work and 1.5% reported other means that would include bicycling. The remaining 4.7% of people reported working from home. **(Figure 5-2.1)**. Commuter mode choices is compared below against commute data from the 2015-2019 ACS.

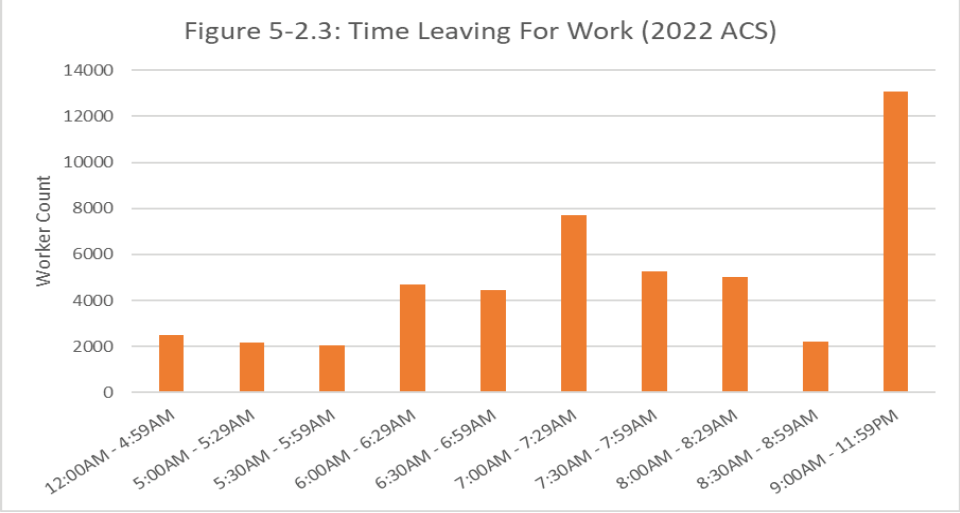




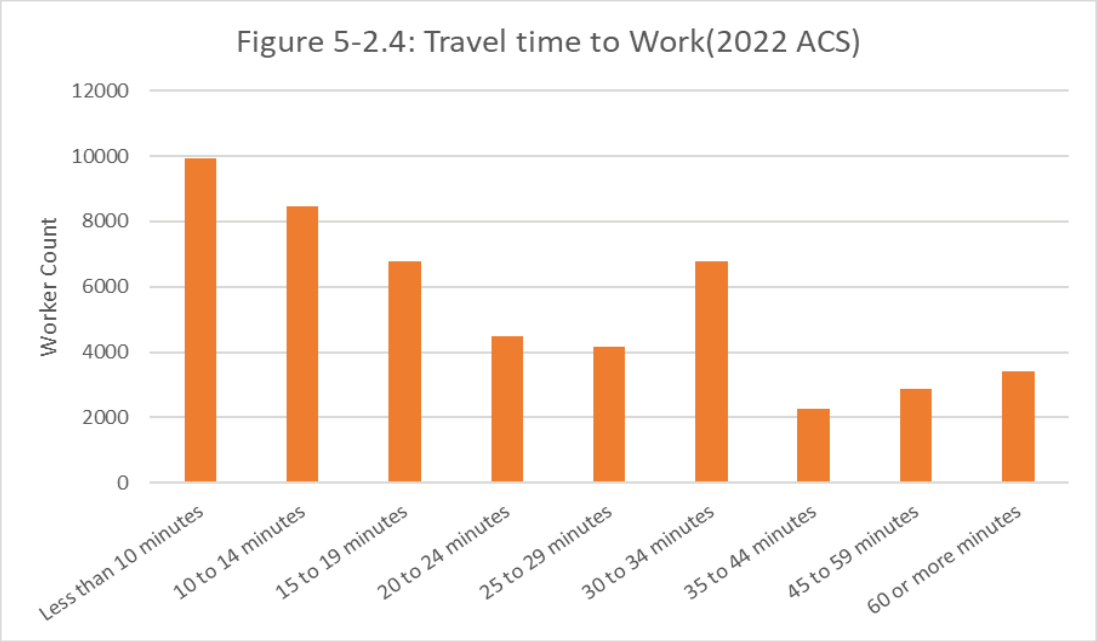
When comparing the two figures, the largest change was largely in estimates for individuals working from home. This in large part due to changes in COVID workplace procedures that are still impacting commutes four years following the pandemic. All other commuter patterns saw slight decreases, aside from a small increase in Other Means commuting up to 1.5%. The largest increase being 4.7% of individuals reporting that they are working from home, up from 3.2% in 2019. **(Figure 5-2.2)**. The increase shows minor evidence to suggest that telecommuting has had a significant impact on commuting behaviors. Residents in rural areas of both counties will be less likely to utilize walking and cycling commuter patterns, and the limited fixed-routes transit provided in Ottawa County will reduce the number of residents utilizing public transit for work. Telecommuting seems to have risen in the region, and may have had a higher impact on residents already utilizing active transportation.

Additionally, when comparing the US 2010 census data to the current 2022 ACS data, there was a slight decrease of residents that reported bicycling/walking, and increase of residents taking transit as their mode choices to commuting to work. The growth in telecommuting may be part of the decline in multimodal choices, as access to high speed internet can be found in cities where multimodal choices are more readily available. Rural areas may lack internet access adequate for full time telecommuting, and may continue to rely on personal vehicles for work commutes.

Time Leaving for Work*:* According to the 2022 ACS, nearly 27 percent of workers across the planning area reported leaving for work between 7:00 and 8:00 AM. **(Figure 5-2.3).** Another 19 percent reported leaving for work between 6:00 and 7:00 AM. A total of 74% of workers reported leaving for work between the midnight and 9AM, with the remaining 26% leaving between 9AM and Midnight.



Travel Time to Work: Travel times are an important factor in measuring the effectiveness of the transportation system. **(Figure 5-2.4)**. Across the planning area, 20% of residents are less than 10 minutes from work, with 51% being within 19 minutes from work. 17% of residents reported commute times between 30 and 29 minutes, with 14% reporting commutes of 30 to 34 minutes. 32% of residents have a commute longer than 30 minutes in the planning area. The mean travel time to work was reported as 23.8 minutes for the planning area.



The travel time information indicates that people tend to make decisions based on a "travel time budget." In other words they tend to live within a particular distance from where they work with respect to the travel time between the two rather than the distance. As such, time saving transportation improvements often impact land use decisions.

Most people living in Erie County also work here. In 2022, an estimated 31,717 (64.5%) people both lived and worked within their respective county of Ottawa, Erie, or Lorain. Of the 49,161 total workers living in the planning area, 35.1% worked outside their county. According to the 2022 US Census Longitudinal Origin-Destination Employment Statistics (LODES), 17,007 people commute into Erie County for work, while 16,663 are employed outside of Erie County but reside here. For all of Ottawa County, including outside of the planning area, 6,272 workers commute in for work, with 12,036 commuting out of county and 5,898 living and working within the county.

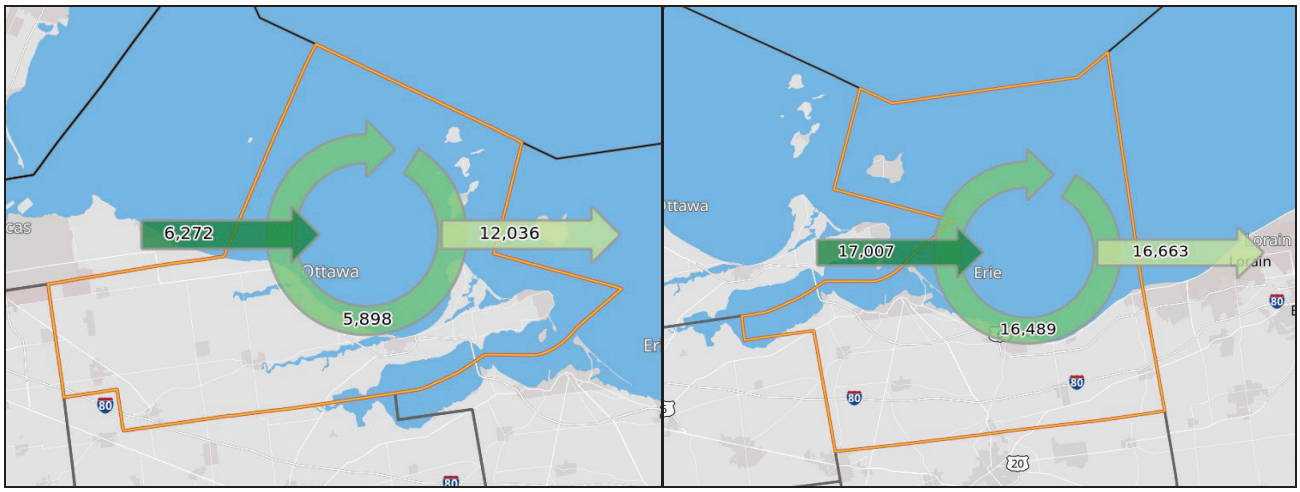


Figure 5-2.5: LODES Inflow/Outflow Analysis

5.3 Transportation Network

Roads: The urbanized area of the MPO is connected to the surrounding communities and rural areas by a system of Federal, State and County highways. The MPO's transportation system includes 1480 miles of roadway. Major routes include: US 6, US 250, State Routes 2, 4, 13, 53, 60, 61, 99, 101, 113 163, and 269. The Ohio Turnpike, I-80/90, is accessible at two locations within the Erie County, and is one of the primary east-west connections. The western portion of Ottawa County has one turnpike interchange outside of the planning area, but locals in Port Clinton are likely to use the interchange north of Fremont in Sandusky County.

Functional Classification System: Functional Classification is the grouping of roads, streets and highways in a hierarchy based on the type of highway service they provide. Streets and highways do not operate independently. They are part of an interconnected network, and each one performs a service in moving traffic throughout the system. Generally, streets and highways perform two types of service. They provide either traffic mobility or land access and can be ranked in terms of the proportion of each service they perform.

Roadways are also divided into urban and rural functional classification systems. The urban system covers all streets, roads and highways located within urban boundaries designated by the US Census Bureau including small urban areas (population 5,000 or more separate from any urbanized area) and urbanized areas (population 50,000 or more.)

The rural functional classification system covers all streets, roads and highways outside small urban and urbanized areas. While urban and rural areas differ, for example, in terms of the density of the land use and intensity of traffic and travel, the same general functional concepts apply to highways in both systems. The principal difference between the two systems is the length of trips both in time and distance.

There are four classes of highways in the Functional Classification System; 1.) Principal arterials, 2.) Minor arterials, 3.) Collector streets, and 4.) Local streets.

The Urban Principal Arterial system is divided into three subclasses: a) Interstates; b) Other Freeways/Expressways- non-Interstate principal arterials with limited access; and c) Other, principal arterials without limited access.

Rural Principal Arterials have two subclasses: a) Interstates, those routes specifically designated as Interstate highways; and Other Principal Arterials.

Because of greater population concentrations, more intense land use, and high traffic volumes in urban areas, some characteristics of urban classes differ slightly from their rural counterparts, for example, in the density and spacing of the urban network and the traffic volume and length of trips. **Figure 5-3.1** below was taken from the 2023 FHWA Highway Functional Classification, Concepts, Criteria, and Procedures manual. The table shows the relationship between classification and travel characteristics.

- Interstates and freeways offer no access to land, only to other roadways in the highway system and carry large amounts of traffic longer distances. The Ohio Turnpike and SR 2 in the MPO area are examples. Principal arterials are usually expressways or major highways such as US 250 and US6

between SR 2 west of Sandusky and SR 2 to the east. They still carry large amounts of traffic longer distances but also offer access to land. Problems arise when in developing areas, developers and community leaders allow the access to land function become more important than the mobility function. Numerous driveways and cross streets create conflicts which can result in congestion and delay with large volumes of traffic.

- Minor arterials support the principal arterial system. Generally they move smaller volumes of traffic moderate to longer distances. In rural areas they connect large towns to each other and larger urbanized areas. SR 53 (Port Clinton to Fremont) and SR 4 (Sandusky to Bellevue and Bucyrus) are examples in the MPO area. In Urban areas, minor arterials are generally major streets such as Perkins Avenue and Columbus Avenue in Sandusky and Perkins Township or US 6 on the east side of the City of Huron or on the west side of the City of Vermilion.

- Collectors collect traffic from local streets (usually residential streets in urban areas and township roads in rural) and deliver it to the arterial street system. Collectors provide access to land but also have a through traffic component. Strub Road in Perkins Township, 6th Street in Port Clinton, River Road in the City of Huron, and West River Road in the City of Vermilion are typical urban collectors. Rural major collectors are the principal connections between townships, provide longer distance intra county travel and deliver traffic to arterials. At an urban-rural boundary, rural major collectors connect directly to urban minor arterials. Rural minor collectors are secondary connectors for townships and small communities. Rural collector roads often link to State Routes (major collectors) or County Routes (minor collectors). E. Bayshore Road and E. Harbor Road are typical rural collectors.

- Local streets provide access to land-residences and businesses in urban areas: farms, residences and occasional business in rural areas. In urban areas most city streets are local roadways in rural areas they are township roads. The traffic on local roads is usually the traveler who intends to access a residence or business along the street.

Functional Classification	Distance Served (and Length of Route)	Access Points	Speed Limit	Distance between Routes	Usage (AADT and DVMT)	Significance	Number of Travel Lanes
Arterial	Longest	Few	Highest	Longest	Highest	Statewide	More
Collector	Medium	Medium	Medium	Medium	Medium	Medium	Medium
Local	Shortest	Many	Lowest	Shortest	Lowest	Local	Fewer

Table 5-3.1 Relationship Between Functional Classification and Travel Characteristics

Maps 5-3.1 and 5-3.3 show the functional classification and Average Daily Traffic (ADT) of roadways in the MPO area. In looking at the map and reading the descriptions of each class it becomes clear that functional criteria and characteristics are more qualitative rather than quantitative. Geography, population density and land use, the size of road network, and travel patterns vary too greatly from state to state, county to county, or city to city, to develop exact criteria for trip lengths, traffic volumes, spacing of routes, or size of population centers. However classification studies by various states show the relative

size of their systems are similar when expressed as a percentage of their total mileage. **Table 5-3.2** below summarizes data taken from the 2023 FHWA Highway Functional Classification Concepts, Criteria and Procedures manual. The table presents a range of percentages to be used in establishing the relative size of the rural and urban systems. In establishing the functional classification of roadways in the MPO area, these guidelines are considered. **Table 5-3.2** also shows the final distribution of the Rural and Urban functional classes in the ERPC MPO area.

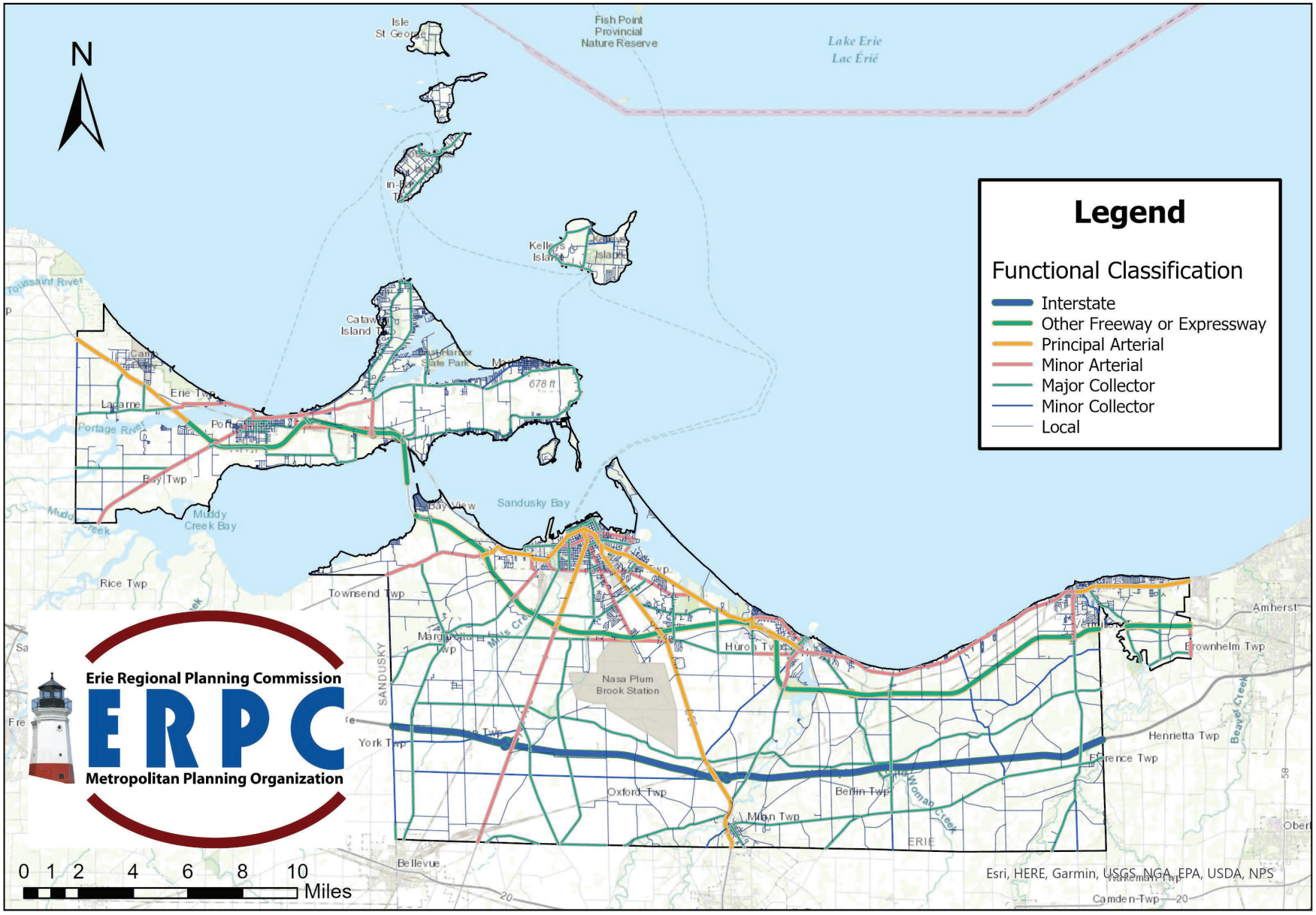
Roadway Functional Classification Group	Range Guidline for Class Group Based On:				IN ERPC MPO Area:	
	Rural		Urban			
	VMT (Vehicles Mile Traveled) [% of total]	Miles (% Of Total)	VMT (Vehicles Mile Traveled) [% of total]	Miles (% Of Total)	Rural % of Miles	Urban % of Miles
Principal Arterial	14 to 30	2 to 6	16 to 31	4 to 5	3.1	9.1
Minor Arterial	11 to 20	3 to 7	14 to 25	7 to 14	2.9	7.4
Major Collector	12 to 23	9 to 19	5 to 13	7 to 15	21.9	10.4
Minor Collector	2 to 9	4 to 15	5 to 13	7 to 15	8.3	1.2
Local	8 to 23	64 to 75	6 to 25	63 to 75	51.6	60.6

Table 5-3.2: Proportion of Roadway Classes in a Regional Network

The Functional classification system has traditionally been used as a method for allocating transportation improvement funds particularly those considered Federal Aid or received through ODOT from the Federal Highway Trust Fund. Prior to 1991 all roads classified as collectors (other than rural minor collectors) and arterials were eligible for Federal Aid. In 1991, the Intermodal Surface Transportation Efficiency Act (ISTEA) created the National Highway System (NHS). The NHS would include the Interstate System plus selected other major roadways serving high volumes of traffic and those providing connections ports and to military facilities. The Interstates and other NHS routes then became the "Federal" system, which Congress and the Federal Highway Administration would focus on. The states (and metropolitan areas) would also receive a block of Federal Aide identified as the Surface Transportation Program, which would cover non-NHS routes except local roads. (Initially Rural Minor Collectors were also excluded.)

The selection of routes eligible for NHS funding was also based on functional criteria although the connectivity to ports and other selected facilities requirement has resulted in lower class roadways such as collectors and local roads are part of the NHS system[1] while principal arterials are not. **Figure 5.3-1** highlight the NHS system in the MPO area. There are approximately 160 miles of NHS highways in the MPO, including 26 miles of Interstate on the Ohio Turnpike. State Route 2 accounts for 72 of the total miles, and US 6 and US 250 has approximately 17 miles and 8 miles respectively. State Route 53 and State Route 163 in Ottawa County have over 7 of the miles, with the remaining 28 miles on the system servicing the area as intermodal connectors. Regarding the National Truck System (shown in **Map 5-3.2**), the MPO area contains approximately 131 miles. SR 2, SR 4 and the Turnpike (80/90) make up most of this route (approximately 108 miles). The remainder of the route is located on SR 53 (5 miles) US 6 (5 miles) and SR 250 (12 miles).

[1] Updated January 2020, FHWA



Map prepared by Erie Regional Planning Commission, and is intended for illustrative purposes only. Erie County, Ohio assumes no responsibility or liabilities for any errors or omissions contained here in.

Figure 5-3.1: Functional Classification

ERPC MPO 2050 Long Range Transportation Plan

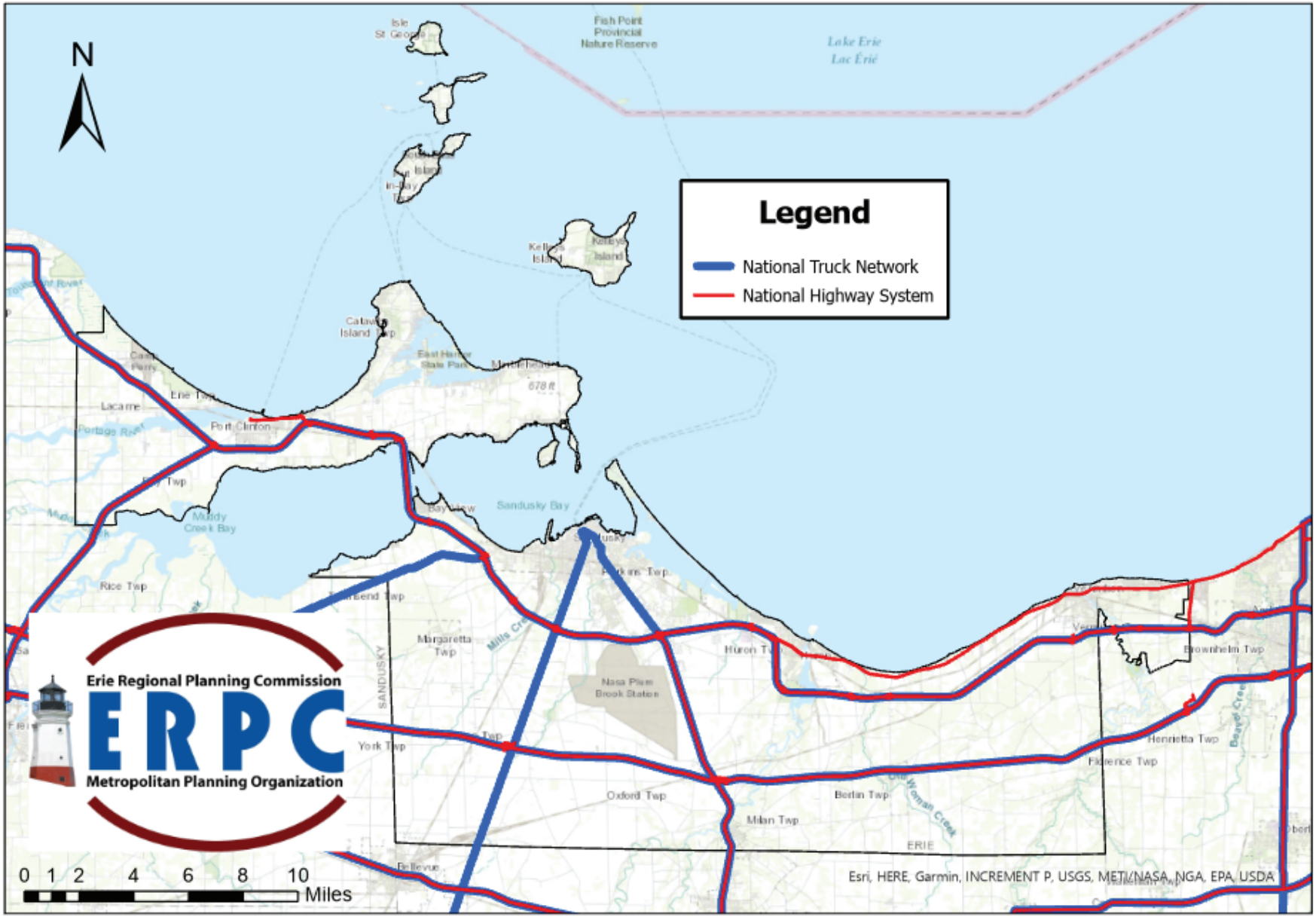


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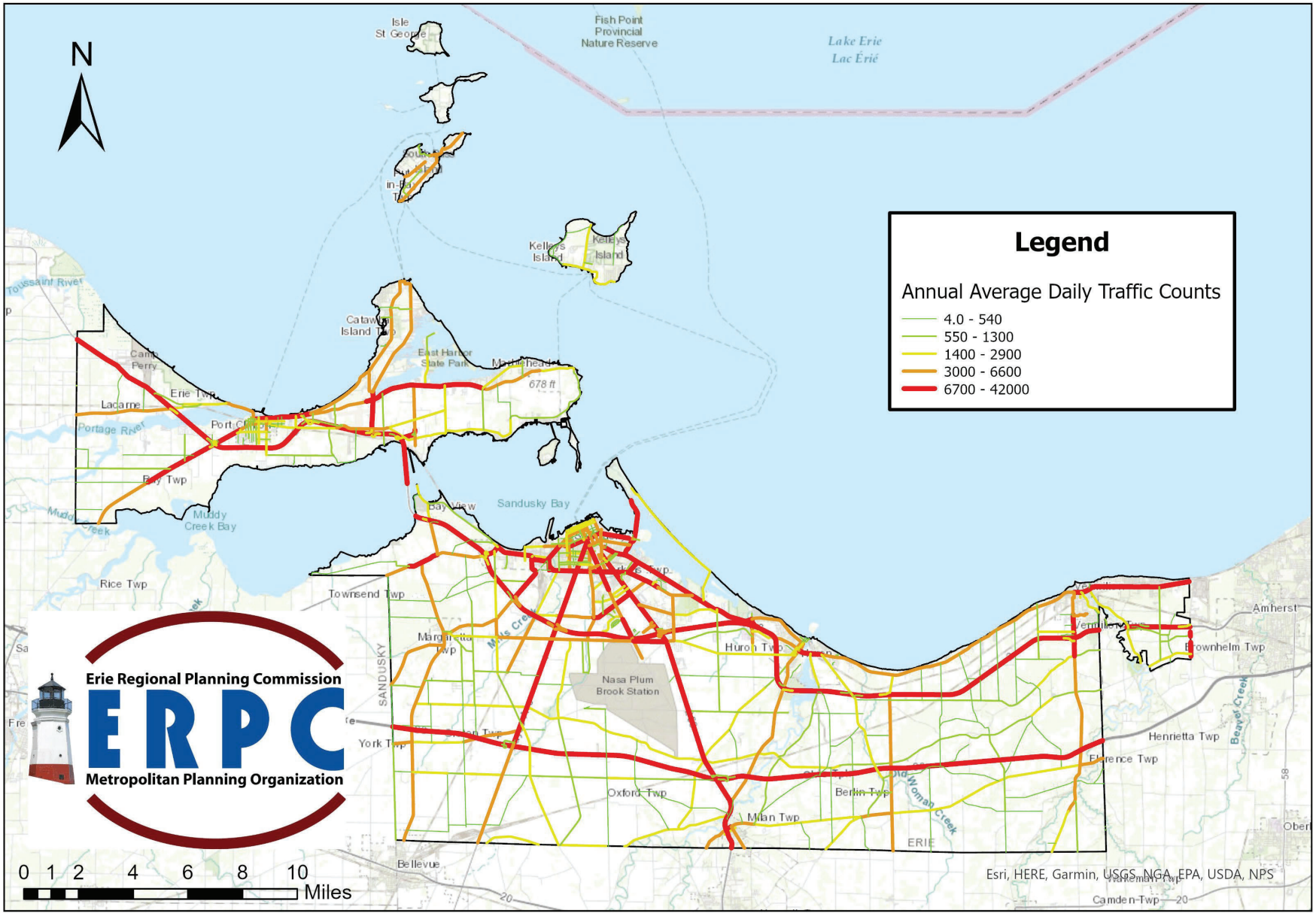
Figure 5-3.2 National Highway System

ERPC MPO 2050 Long Range Transportation Plan



Map prepared by Erie Regional Planning Commission, and is intended for illustrative purposes only. Erie County, Ohio assumes no responsibility or liabilities for any errors or omissions contained here in.

Figure 5-3.3: Annual Average Daily Traffic Counts

ERPC MPO 2050 Long Range Transportation Plan

Level of Service Analysis: An analysis was completed to evaluate the existing roadway systems Level of Service (LOS). LOS is a qualitative measure describing operation conditions within a traffic stream under a given demand. The system uses levels to represent a range of operating conditions defined by measures of effectiveness. The transportation LOS system uses the letters A through F, with A being best and F being worst. The Transportation Research Board's Highway Capacity Manual and **American Association of State Highway and Transportation Officials (**AASHTO) Geometric Design of Highways and Streets ("Green Book") list the following levels of service:

- **LOS A** is the best, described as conditions where traffic flows at or above the posted speed limit and all motorists have complete mobility between lanes. LOS A occurs late at night in urban areas, frequently in rural areas, and often seen generally in car advertisements.

Level of Service	General Operating Conditions
A	Free flow
B	Reasonably free flow
C	Stable flow
D	Approaching unstable flow
E	Unstable flow
F	Forced or breakdown flow

Figure 5-3.4: LOS from AASHTO "The Green Book"

- **LOS B** is slightly more congested, with some hindrance of maneuverability; two motorists might be forced to drive side by side, limiting lane changes. LOS B does not reduce speed from LOS A.

- **LOS C** has more congestion than B, where ability to pass or change lanes is not always assured. LOS C is the target for urban highways in some places, and for rural highways in many places. At LOS C most experienced drivers are comfortable, roads remain safely below but efficiently close to capacity, and posted speed is maintained.

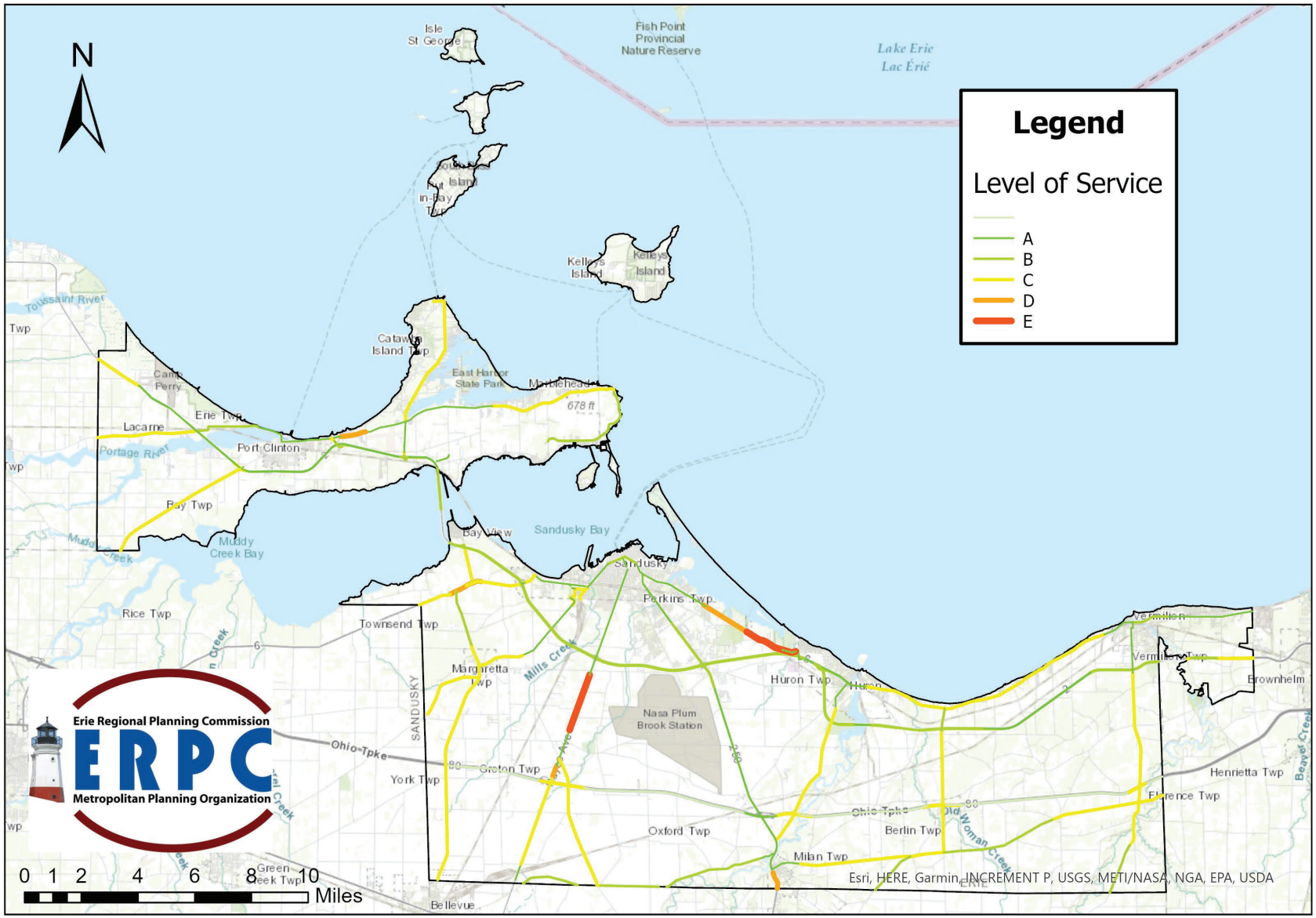
- **LOS D** is perhaps the level of service of a busy shopping corridor in the middle of a weekday, or a functional urban highway during commuting hours: speeds are somewhat reduced, motorists are hemmed in by other cars and trucks. LOS D is a common goal for urban streets during peak hours, as attaining LOS C would require a prohibitive cost and societal impact in bypass roads and lane additions.

- **LOS E** is a marginal service state. Flow becomes irregular and speed varies rapidly, but rarely reaches the posted limit. On highways this is consistent with a road at or approaching its designed capacity. LOS E is a common standard in larger urban areas, where some roadway congestion is inevitable.

- **LOS F** is the lowest measurement of efficiency for a road's performance. Flow is forced; every vehicle moves in lockstep with the vehicle in front of it, with frequent slowing required. Technically, a road in a constant traffic jam would be at LOS F. This is because LOS does not describe an instant state, but rather an average or typical service.

Figure 5-3.4 shows LOS under summer weekday condition; which was determined overall to have more traffic than spring or summer weekends. Most low ranking LOS facilities on the map are located along major routes entering the City of Sandusky. As tourism levels hit their height during summer weekdays,

traffic increases along main routes particularly those leading to the Cedar Point Amusement Park. Also, it is important to note that the level of service maps generated from the travel demand model may not totally reflect site specific conditions and as such, forecasts of future congestion patterns are typically followed up with site-specific studies before specific improvements are proposed by the MPO's member jurisdictions. **Figure 5-3.4** displays the results of the LOS analysis based on referenced free-flow conditions to average travel time. All facilities classified as a local road were excluded in this analysis due to low volumes and the fact that as they are not included in the federal aid highway system, they are not eligible for MPO funding.



Map prepared by Erie Regional Planning Commission, and is intended for illustrative purposes only. Erie County, Ohio assumes no responsibility or liabilities for any errors or omissions contained here in.

Figure 5-3.4: Existing Level of Service

ERPC MPO 2050 Long Range Transportation Plan

Safety Analysis: Crashes are a measure of highway safety. One way to identify high crash locations is the absolute number of crashes occurring at a location in a specified time period, which is usually three years. Another way is to use the crash rate, or the absolute number of crashes in the time period divided by the number of vehicles passing through the location in that time period. The location with the highest number of accidents is ranked first, followed by the location with the second highest number of accidents, and so on. This method does not consider the differing amounts of traffic at each location. Therefore, the frequency method tends to rank high volume locations as high crash locations, even if those locations have a relatively low number of accidents for the traffic volume.

Another way to identify high crash locations is by the crash rate, the absolute number of crashes in the time period divided by the number of vehicles passing through the location in that time period. ERPC uses the frequency method to select a group of high-accident locations and then uses the crash rate method (where traffic counts are available) to calculate the crash rate. ERPC will continue to make concerted efforts in the upcoming traffic counting seasons to capture traffic counts for those locations on the crash frequency list in order to calculate crash rates.

Table 5-3.3 lists the highest-ranking crash intersections by number and severity of crashes (within 0.10 mile from the intersection) during the three-year period 2021, 2022 and 2023. Calculated crash rates are also listed where traffic volume data were available; however, crash rank order is based on equivalent property damage only (EPDO), considering both the frequency of the accidents and the severity to vehicle occupants as a weighted with respect to the severity level. The following two charts (**Table 5-3.3 and 5-3.4)** rank the top 25 accident intersections based on EPDO and on cumulative number of accident, respectively.

The highest number of crashes at any location was 68 in the three-year period, which occurred at US 250 and Strub Road. This is 23 accidents less than the highest crashes as listed in the 2045 LRTP update. Where traffic information was available for all streets at the intersection, the crash rate ranged from 0.56 crashes per million vehicles to 4.55 crashes per million vehicles across the top 25 EPDO intersections. Crash information as presented here is an initial step in determining whether a location has an important and correctable safety problem. Both absolute numbers and the crash rate are important guides. However, the crash rate often carries more weight because the number reflects the potential for a crash at a location. The crash rate is expressed as “crashes per million vehicles entering the intersection”. The crash rate provides a basis for identifying "high crash" sites. Typically, optimal levels for crash rates is 1.0 or below. The crash rate takes into account the traffic volume at the intersection, which is one of the greatest predictors of the quantitative risk of a crash. For example, the intersection at SR 4 and Perkins Avenue had 62 crashes with a crash rate of 1.75. In comparison, SR 269 at Portland Road shows fewer crashes at 17, but the crash rate is higher at 4.55.

Also, it is noted that many crashes are not considered by definition accidents. An accident is defined as no reasonable amount of driver car, caution or roadway improvements could prevented it from occurring while crashes are the result of driver carelessness-speeding, following too closely, driving too fast for conditions, or DWI etc. In some cases, correctable roadway conditions have a direct or contributing effect on the number and severity of crashes at a location. A traffic safety study is usually conducted to determine the seriousness of the crash problem at a location and to identify potential remedies to identified deficiencies. Those remedies can include physical improvements such as new roadway geometry, signals to conveying information about roadway conditions to drivers, or enforcing driving related laws.

ODOT and the MPO regularly review the highest (based on absolute numbers and the crash rate) crash locations to identify those with the most serious conditions. That evaluation includes summary statistics on the severity (fatalities, injuries or property damage), weather conditions, time of day, etc. The most serious crash locations are placed on ODOT's Highway Safety Improvement Program (HSIP) list for further evaluation and recommendations for potential improvements (**Figure 5-3.5 and Figure 5-3.6**).

Table 5-3.3: EPDO Crash Intersection Locations[2]

Intersection Rank (EPDO)	Jurisdiction	Intersection Name	Number of Crashes	Crash Rate
1	Perkins Township	E Strub Rd & US-250 (Milan Rd)	68	2.42
2	Groton Township	Portland Rd & SR 269	32	4.55
3	Perkins Township	Perkins Ave & SR 4 (Hayes Ave)	62	1.75
4	Perkins Township	W Strub Rd & SR 4	38	1.82
5	Perkins Township	Fun Dr & US-250 (Milan Rd)	36	0.97
6	Danbury Township	SR 163 & NE Catawba Rd	41	2.09
7	Sandusky	Perkins Ave & US-250 (Milan Rd)	48	1.34
8	Perkins Township	Mall Blvd & US-250 (Milan Rd)	35	-
9	Huron Township	Perkins Ave & US-6	39	2.51
10	Perkins Township	Perkins Ave & Columbus Ave	35	0.95
11	Perkins Township	On/Off Ramp - SR 2 & SR 4 (Hayes Ave)	27	1.48
12	Perkins Township	E Strub Rd & Columbus Ave	40	2.33
13	Perkins Township	On/Off Ramp - SR 2 (E) & US-250 (Milan Rd)	28	0.88
14	Milan Township	Mason Rd & Mudbrook Rd (SR 13)	17	2.25
15	Huron Township	US-6 & Rye Beach Rd	28	1.37
16	Perkins Township	W Strub Rd & Campbell St	23	1.79
17	Perkins Township	W Bogart Rd & SR 4 (Hayes Ave)	30	1.70
18	Perkins Township	On/Off Ramp - SR 2 (W) & US-250 (Milan Rd)	28	0.65
19	Sandusky	W Monroe St & Clinton St	5	-
20	Perkins Township	Crossings Rd & US-250 (Milan Rd)	23	0.62
21	Perkins Township	W Perkins Ave & Campbell St	18	0.56
22	Milan Township	Mason Rd & US-250 (Milan Rd)	22	1.06
23	Perkins Township	DeWitt Ave & US-250 (Milan Rd)	17	0.80
24	Erie Township	W Lakeshore Dr & SR 2	9	0.91
25	Sandusky	Scott St & Milan Rd	16	1.58

[2] ERPC 2025 Draft Crash Summary Report - Ranked by EPDO

Table 5-3.4: Crash Intersection Locations[3]

Frequency Rank	Jurisdiction	Intersection Name	Number of Crashes	Crash Rate
1	Perkins Township	E Strub Rd & US-250 (Milan Rd)	68	2.42
2	Perkins Township	Perkins Ave & SR 4 (Hayes Ave)	62	1.75
3	Sandusky	Perkins Ave & US-250 (Milan Rd)	48	1.34
4	Danbury Township	SR 163 & NE Catawba Rd	41	2.09
5	Perkins Township	E Strub Rd & Columbus Ave	40	2.33
6	Huron Township	Perkins Ave & US-6	39	2.51
7	Perkins Township	W Strub Rd & SR 4	38	1.82
8	Perkins Township	Fun Dr & US-250 (Milan Rd)	36	0.97
9	Perkins Township	Perkins Ave & Columbus Ave	35	0.95
9	Perkins Township	Mall Blvd & US-250 (Milan Rd)	35	-
11	Groton Township	Portland Rd & SR 269	32	4.55
12	Perkins Township	W Bogart Rd & SR 4 (Hayes Ave)	30	1.70
13	Perkins Township	On/Off Ramp - SR 2 (W) & US-250 (Milan Rd)	28	0.65
13	Perkins Township	On/Off Ramp - SR 2 (E) & US-250 (Milan Rd)	28	0.88
13	Huron Township	US-6 & Rye Beach Rd	28	1.37
16	Perkins Township	On/Off Ramp - SR 2 & SR 4 (Hayes Ave)	27	1.48
17	Perkins Township	Hull Rd & US-250 (Milan Rd)	23	0.58
17	Perkins Township	Crossings Rd & US-250 (Milan Rd)	23	0.62
17	Perkins Township	W Strub Rd & Campbell St	23	1.79
20	Perkins Township	On/Off Ramp - SR 2 & Rye Beach Rd	22	0.94
20	Milan Township	Mason Rd & US-250 (Milan Rd)	22	1.06
22	Sandusky	Cedar Point Dr & US-6	20	1.17
23	Sandusky	Remington Ave & US-6	19	0.81
23	Groton Township	Portland Rd & SR 4	19	1.54
25	Perkins Township	W Perkins Ave & Campbell St	18	0.56
25	Perkins Township	W Perkins Ave & Caldwell St	18	0.65

[3] ERPC 2025 Draft Crash Summary Report - Ranked by EPDO

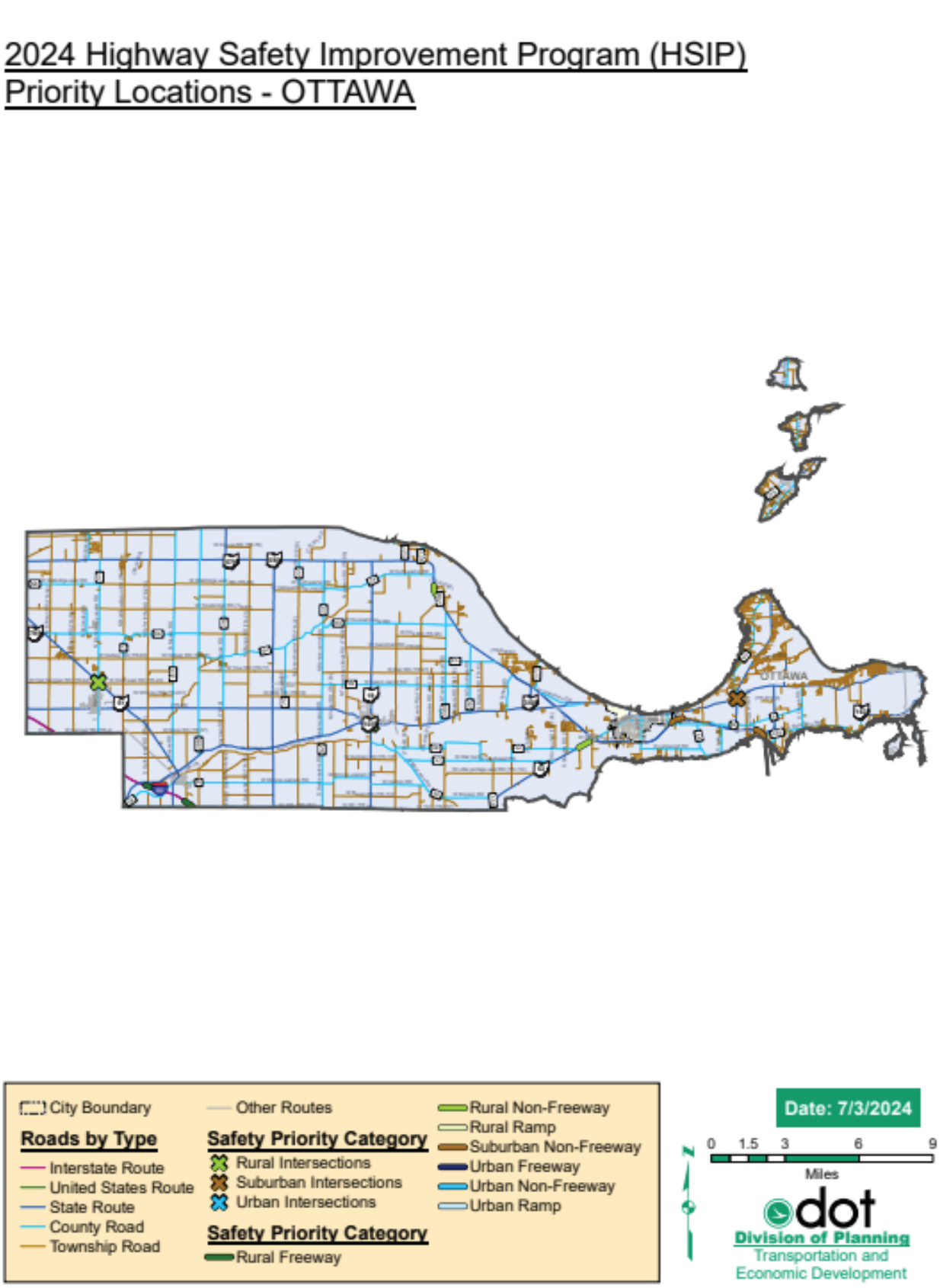


Figure 5-3.5 HSIP Map - Ottawa County

2024 Highway Safety Improvement Program (HSIP) Priority Locations - ERIE

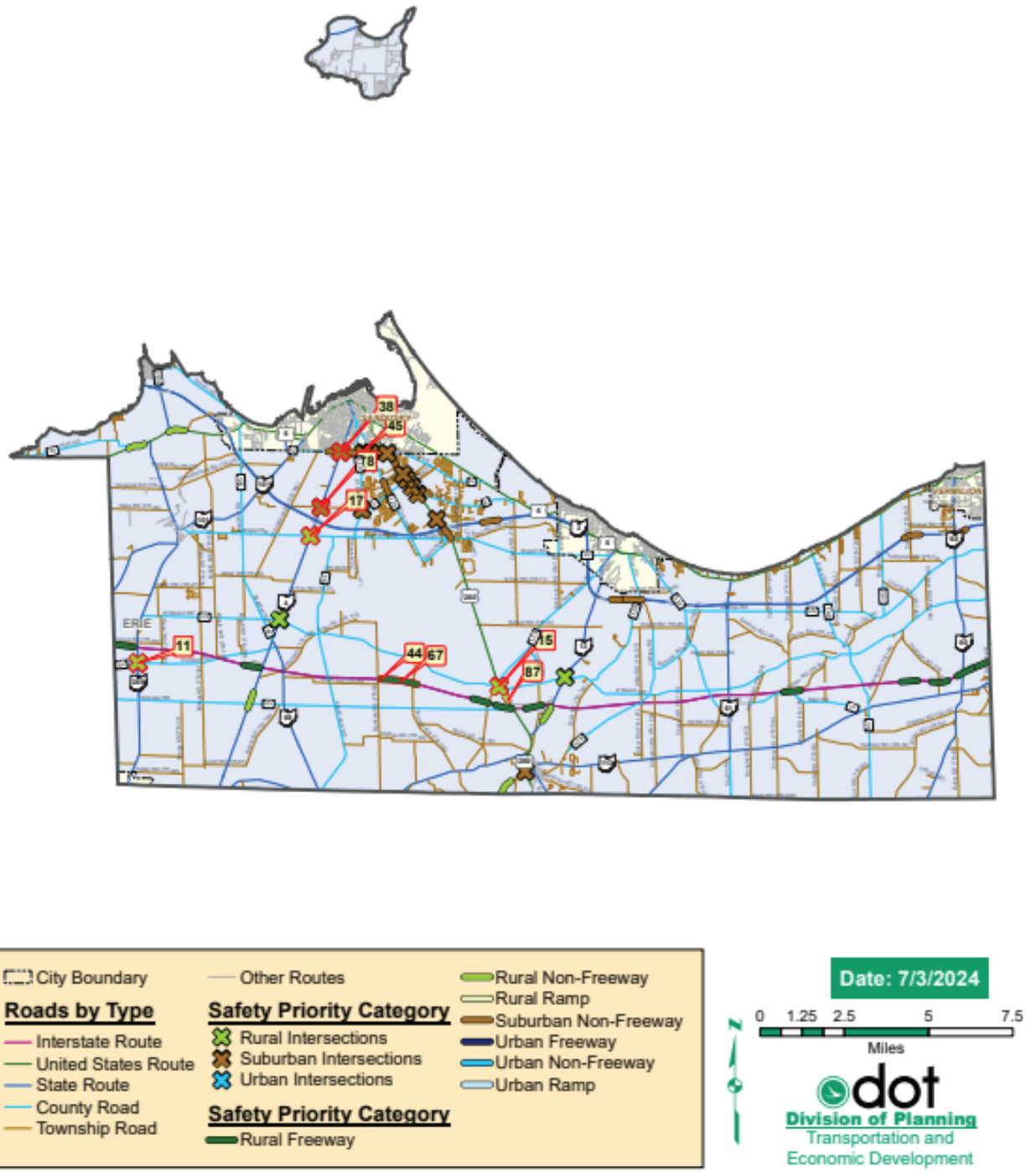


Figure 5-3.5 HSIP Map - Erie County

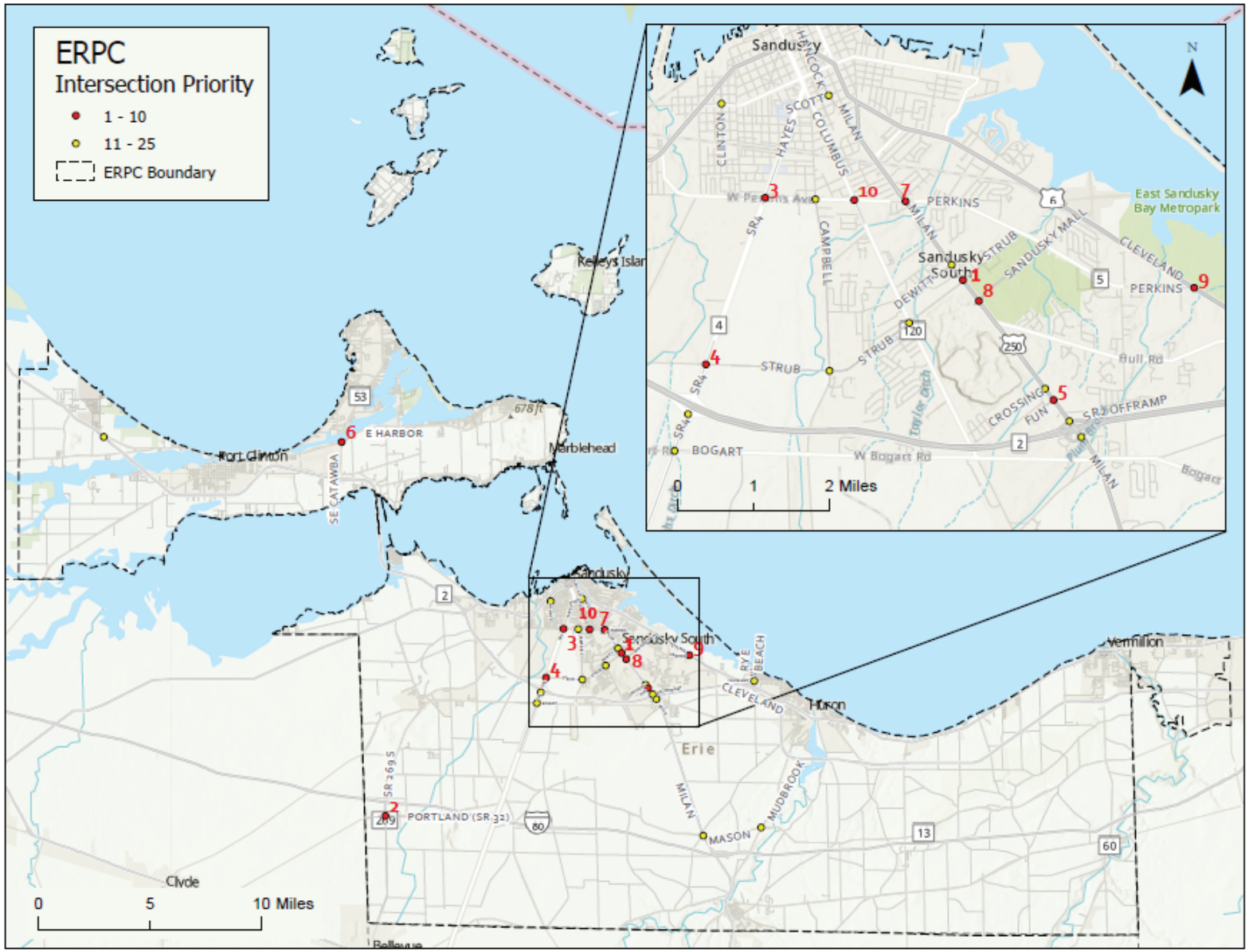


Figure 5-3.5: High Crash Frequency Intersection Locations

Pavement Conditions: A major element of a transportation plan is to maintain the system. Pavements deteriorate for a variety of reasons. In northern Ohio, weather, road deicing salts, lack of maintenance, and traffic are the principal causes. Heavy trucks, both by size and numbers, also have a significant effect on road deterioration. In addition to fixing rough pavements (cracks, patches and disjointed pavement slabs) for comfort, safety, and to prevent future problems, it is also important to eliminate wheel ruts, which hold water and result in hydroplaning or slippery conditions when the water freezes.

There is no formula for estimating the need for pavement maintenance as pavement conditions reflect how the pavement was constructed, the amount and kind of traffic, and weather conditions. Therefore, larger agencies responsible for roadway maintenance have a pavement management system and regularly rate pavement conditions on the streets and roads under their jurisdiction. The general practice is to rate pavement on a scale of 1 to 100 based on observed conditions and some testing. Lower values mean poorer pavement conditions. ODOT classifies roads into one of three policy systems: the priority system, general system or urban system.

Priority Systems: There are three priority systems including: 1.) All interstate routes, excluding the Turnpike 2.) All divided National Highway System routes (NHS) routes inside incorporated areas with populations of 5,000 or more that have a functional class of 12 (other urban freeways and expressways) and 3.) All divided NHS routes outside of incorporated areas with populations of 5,000 or more. ODOT considers priority system pavements to be in or approaching poor condition if the pavement condition rating (PCR) is less than 65.

General System: Includes all non-priority routes outside of municipalities with populations of 5,000 or more. ODOT considers general system pavements to be in or approaching poor condition if the PCR is less than 60.

Urban System: Includes all non-priority routes within municipalities with populations of 5,000 or more. ODOT considers urban system pavements to be in or approaching poor condition if the PCR is less than 55.

ODOT's pavement condition rating records were utilized in the evaluation of roads for the ERPC MPO region for this plan. ERPC MPO identified 9 segments across Erie, Ottawa and Lorain County that failed the criteria for general system and urban system PCR. The segments total 7.8 miles of roadway across the network. Out of 9 segments, 4 projects are part of various projects for roadway preservation over the next four years.

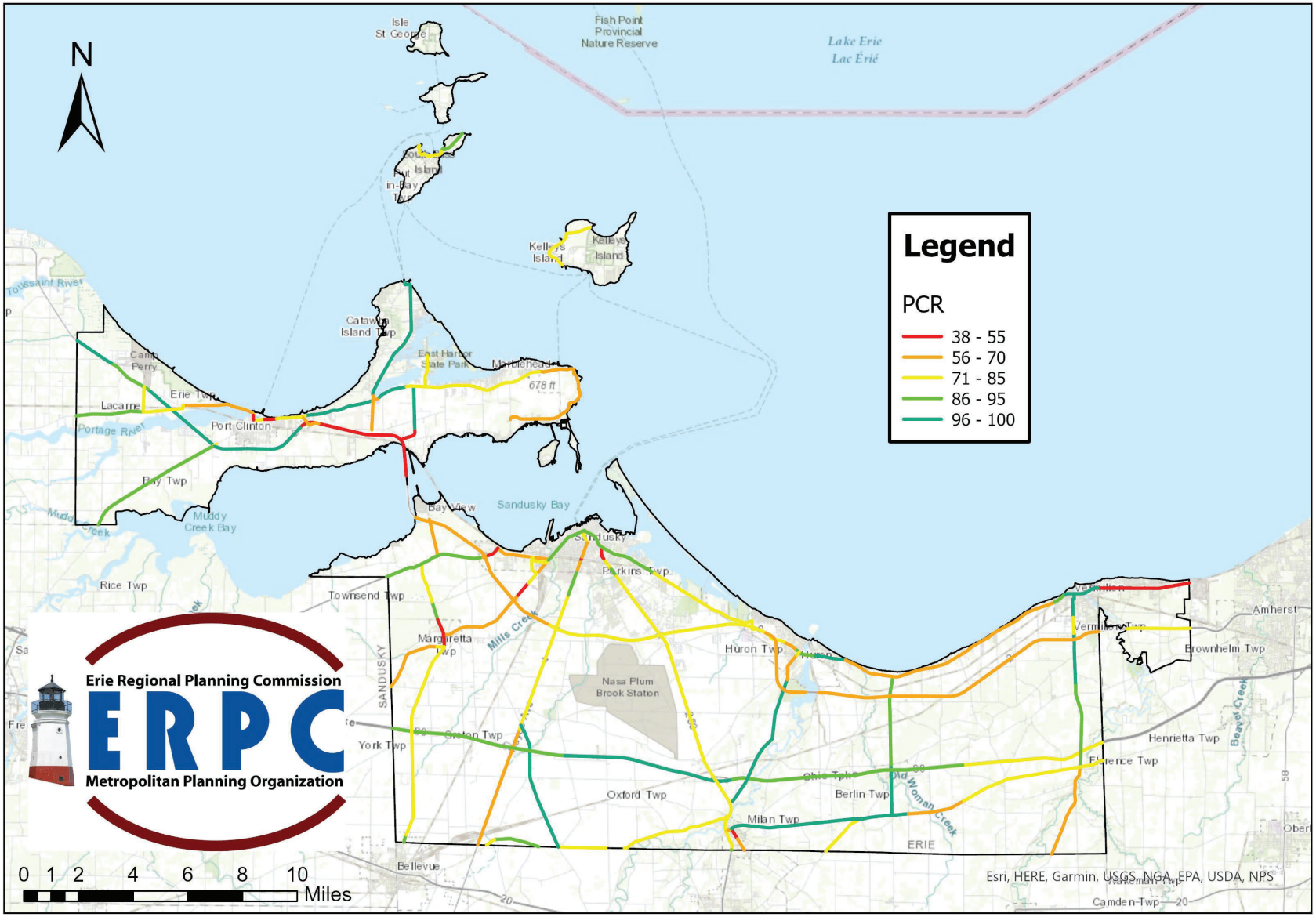


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Figure 5-3.6: Pavement Condition Rating (2024)

ERPC MPO 2050 Long Range Transportation Plan

Bridges: Bridges are structures over ten feet long, which carry a road way over an obstruction such as a river, railroad or another roadway. Bridges have different, usually longer, maintenance and functional lives than the roadways on either end. Therefore, bridge maintenance is often carried out at a different time than the adjoining roadway. When maintenance is required, however, the maintenance cost can be considerably higher than adjoining road repairs. The closure of bridges can greatly impact the traffic flow in an area and can limit access. The combination of the disruption to the transportation system the high cost for repairs/ maintenance have resulted in bridges have special funding categories.

There are 376 bridges in the MPO area. ODOT is responsible for 148 bridges; the Ohio Turnpike Commission, 30; Erie, Ottawa and Lorain (in the City of Vermilion) Counties (for county, township and village bridges), 178; larger municipalities, 18; and 2 by Ohio Division of Natural Resources (ODNR). These bridges are inspected annually, and the structures rated. The bridge is then appraised, based on the bridge rating, traffic, and other factors to determine a priority for maintenance. The bridge appraisals are on a ten-point scale with lower numbers indicating more serious structural deficiencies and high impacts to the traveling public should the bridge be closed, while larger numbers indicate bridges in good condition. **Table 5.3-4** lists the general appraisals for bridges in the MPO as of October 2025:

Table 5.3-4: Bridge Conditions

Bridge Condition	Appraisal Rating	Number of Structures
Critical	0 through 2	0
Poor	3 and 4	6
Fair	5 and 6	114
Good	7 through 9	256

The Federal Highway Administration (FHWA) Bridge Inventory manual provides ranking criteria on all bridges. There are three criteria by which bridge conditions are measured: 1.) The deck, 2.) The superstructure and 3.) The substructures. Below these criteria are shown as applicable to the planning area:

- The bridge deck condition describes the overall condition rating of the surface. Five in service bridges in the MPO area have a ranking of poor while the remaining are fair or better.

- The superstructure ranking criteria evaluates the condition of all structural components of the bridge. Six bridges in the region are listed as having poor superstructures.

- The substructure criterion describes the physical condition of the abutments, piles, piers and other base structural components. Three bridges in the area are listed as having poor substructures.

Each of the bridges with poor ratings on deck, substructure, or superstructure also have overall general appraisal ratings of poor. The six structures are located at the following: Harborview Drive in Huron; Vermilion Road and Jerusalem Road within the City of Vermilion; and the railroad underpasses at Tiffin Avenue (2) and Hayes Avenue in the City of Sandusky.[4]

[4] TIMS

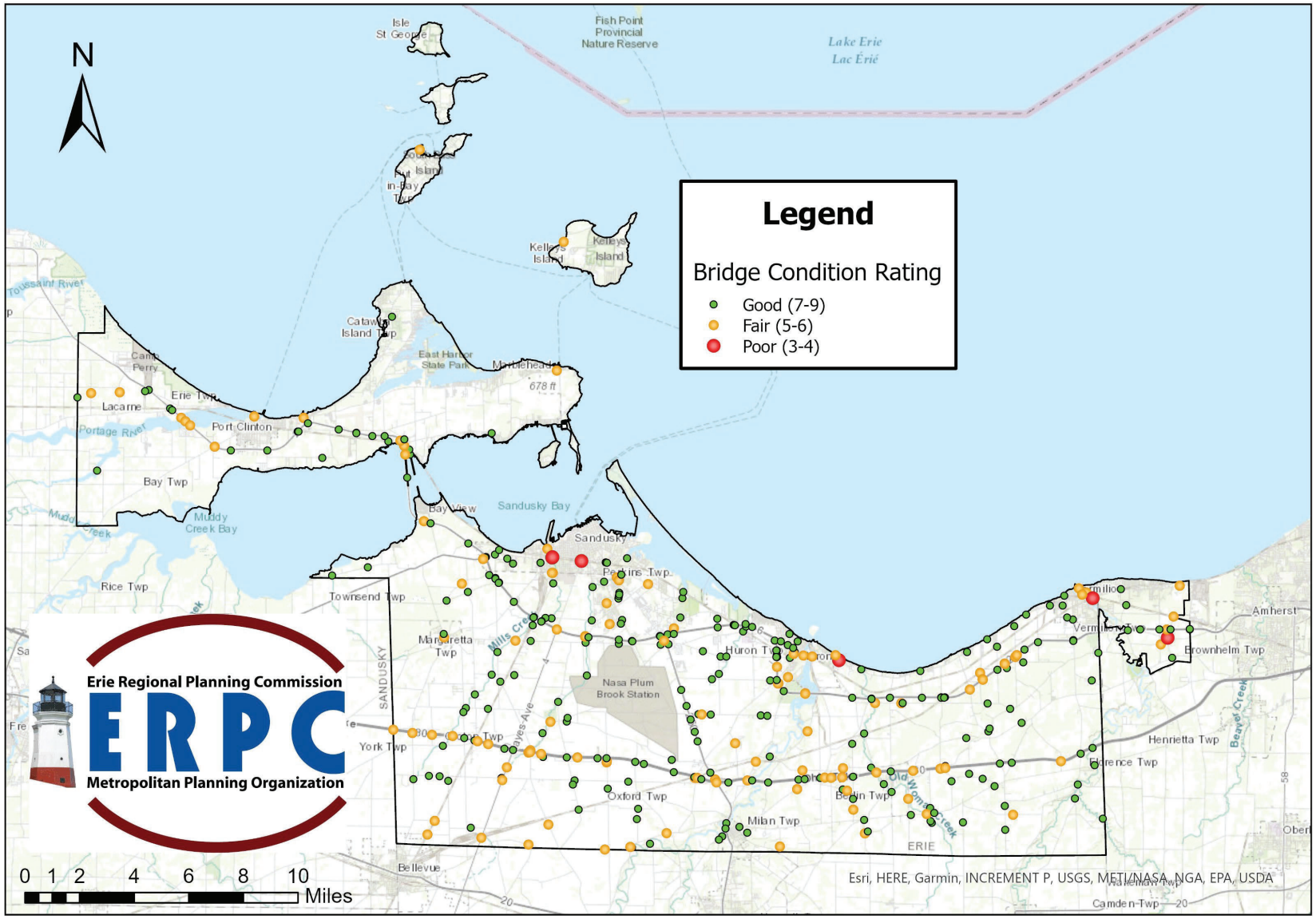

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Figure 5-3.7 Bridge Condition Rating (2025)

ERPC MPO 2050 Long Range Transportation Plan

Connectivity: Connectivity can be considered the global concept of access. It is the ability to move relatively directly and easily between one are and another. For the MPO, this includes external trips to the rest of the state and beyond, and internal trips, that begin and end within the MPO. There are as many connectivity issues as there are travelers with an origin (often home) and a destination (work, shopping and recreation). Some of the more important internal connectivity issues raised by stakeholders and the public include the following:

- **East-West Connectivity:** East-west connectivity through the MPO Region has typically been adequate thanks to State Route 2 and Interstate 80. The Sandusky Bay and Edison Bridge bottle neck, and certain land uses including the NASA Neil A. Armstrong Test Facility and quarries in Perkins and Danbury Township can cause internal connectivity issues for east-west travel in the region.

- **North-South Connectivity:** The main north-south routes into and out of the region have primarily been State Route 53, State Route 4, and US Route 250. The primarily two lane roadways provide adequate north-south connectivity to the surrounding area, but has been noted as lacking adequate access for connections through the rest of the state, that can impact freight movement and tourist flows during peak summer hours.

- **The Islands:** Although not completely a roadway issue, public access to the Lake Erie Islands, including Put-In-Bay and Kelley's Island, can pose connectivity issues within the MPO. Inclement weather, limited access points, and peak tourist travel congestion can all be possible issues for travel to and from the island. Ferry services are available in Port Clinton, Catawba Township, Danbury Township, and the City of Sandusky, with only Catawba and Danbury township ferries able to bring personal vehicles over. The Erie-Ottawa International Airport provides access to the islands, and are also accessible by personal boats. Current ferry services are important to maintain as a vital connection to the islands. However, the islands are known for their low stress network and recreational facilities for tourists, and reduced traffic patterns helps maintain this network for current residents.

- **Cedar Point:** This major traffic destination is difficult to reach because the route designated for visitors is highly congested both with visitors and local residents going to shopping facilities as well as traffic signal proliferation and spacing and lack of access management. Alternative routes and improvements to GPS mapping has increased traffic on alternative routes and neighborhoods not currently designed for the increased through traffic.

- **Waterfronts:** The Cities of Sandusky, Port Clinton, Vermilion, and Huron have marinas lake front access that encouraged the development of associated business including boat sales/repair and waterfront restaurants/motels developing in the old port areas. Reaching these destinations from neighborhoods, rural areas and SR 2 for longer distance users cross older urban streets which can be difficult. However; most users are engaged in recreational activities and therefore willing to accept longer and more difficult commuting patterns.

- **Downtown Sandusky:** The Sandusky Downtown business district can be difficult to reach although the principal arterial network functions to service this area. In addition, most of the roadways are narrow and are angled in way that makes them difficult to navigate.

- In addition to the connectivity issues listed above there were also more localized connectivity/access issues that were raised in the Public Involvement Summary. It is noted that many of these issues that were mentioned were identified as being unique to a specific area and therefor will need to be addressed locally. As specific improvements for these issues are developed the MPO is then able to include them in the LRTP update.

Another issue that emerged through thee public involvement phase was external connectivity. Unfortunately, these connectivity issues cannot be solved solely by the MPO Area, but with the assistance of other agencies such as ODOT, other MPOs or Small Urban Areas some of these issues may be collaboratively remediated and addressed. The more significant regional issues include:

- **Travel to the City of Cleveland:** Some residents in the eastern part of the MPO, particularly the City of Vermilion, work in the City of Cleveland. Improving travel, possibly with commuter rail, to Cleveland is a desirable undertaking as voiced through public input.

- **Travel to Central Ohio:** Currently east-west routes in the MPO area include I-80/90, SR 2 and to portions of US 20. These routes provide good east-west connectivity with roads constructed to interstate/freeway standards. US 20 for example utilizes a four-lane expressway with urban by-passes standards. When travelling south into Central Ohio from both Erie and Ottawa County, there are two lane rural arterials with at grade intersections that pass through small villages and towns. Improved routes would include avoiding travel through larger towns, reducing signalized intersections for north/south priority, and road widening when feasible.

- **Connections to I-71 and I-75:** This issue is a companion of the Central Ohio corridor addressed above. To reach one of these two north-south Interstate routes travelers must go east of west from the MPO area, or navigate rural roads to connections further south. Upgraded connections could save considerable time for travelers taking the Interstate System to destinations outside the state to the south.

Access Management: Access management is a means of organizing and designing access points along roadways to balance the movement function while still providing access to lowered classes of roadway or to property. Access management also includes the consideration of access to high-and low-class roadways. Access points are an important part of access management. Access points are “points of conflict” where vehicle movements are across or against each other. Remedies include drivers slowing down or traffic engineers installing stop signs, signal or other design elements to minimize the potential conflicts and crashes. These rrestrictions on traffic movement also reduce the carrying capacity of a roadway.

Currently there are three agencies with access management policies in the MPO area. The first agency is ODOT. ODOT has an access management policy for all roadways under its jurisdiction including all US and State Routes in unincorporated areas. The second agency is the Ohio Turnpike Commission. The Turnpike Commission manages access to the Interstate Routes in the MPO as the only designated Interstate Highways are under OTC jurisdiction. OTC access policies generally follow ODOT’s policies for Interstate routes with the additional consideration the access points also must meet a revenue test. The

third agency is Erie County; which has prepared an access manual as authorized by the Ohio Revised Code for county and township roads. The manual, as adopted in by the County Commissioners and effective as of August of 2018; defines the general requirements for access such as the spacing of access points and access point dimensions. The regulation works in conjunction with County and township master plans and associated zoning regulations. It also includes the need for traffic impact studies for new developments generating high volumes of traffic. The cities in the MPO area do not have access management plans but have some control of access with zoning and building codes.

5.4 Transit Systems

Coordinated Transportation Plan Update: Since its inception the MPO staff has assisted STS and other transit providers in obtaining funds through the Erie County Coordinated Transportation Plan. In order to receive many of these supplemental state funds the planning area of the recipient must have a state approved plan. The plan contains information, analyses and findings compiled from an evaluation of community characteristics, a stakeholder assessment and an inventory of existing transportation services. It also provides a description of the unmet transportation needs in the Erie County Area determined by using various methods such as agency surveys, demographic research and ongoing stakeholder input.

Originally, ERPC staff had played a main role in writing the plan and keeping it up to date over the years. The first coordinated plan was completed in 2007, and representatives from the Sandusky Transit System (STS) and Serving Our Seniors (SOS) were key partners in its development. Since then the plan has been updated several times including 2010, 2013 and 2018. An official statewide plan template and annual review requirement was created by ODOT in 2018. Erie County completed their state approved plan using the new template in 2018 and their first annual review in 2019. Beginning in 2021, ERPC staff began working with Great Lakes Community Action Partnership (GLCAP) for plan updates and development utilizing the state template.

Mobility Management: The *Yes Express*, a feasibility plan, was conducted in 2013 with Local Government Innovation Funding. The study recommended the hiring a transportation coordinator. In 2018 that recommendation became a reality. A mobility manager was assigned to Erie County and the City of Vermilion through a transit grant from ODOT. The mobility manager is housed and employed by the GLCAP. Staff works with the mobility manager to implement strategies listed in the Coordinated Plan.

Small Scale Transit Providers: ERPC staff has assisted other local agencies (Lucy Idol Foundation, Serving Our Seniors, The Meadows etc.) in obtaining 5310 and other funds for supplemental transit services. Ability Works worked with ODOT on an experimental small scale transit option that was tried for a year in 2020 to provide service between New London and US 250 in Sandusky. .

Background of the Sandusky Transit System: The Sandusky Transit System (STS) is the main transit provider in the planning area. Services include demand response service county-wide including the entire City of Vermilion. STS shares their facility (dispatch center and vehicle parking/maintenance facility) with other local transit providers including both Greyhound and AMTRAK. The transit hub is located on Depot Street in the City of Sandusky.

The system was created in late 1992 and began providing demand response service in the city limits (Sandusky) and to 32 locations in the county. The next year, STS began operating a contract service with

the Erie County Board of Development Disabilities (ECBDD). In 1997, Erie County (as well as ODOT) began providing financial support to STS in order to expand the service area of STS beyond the Sandusky city limits. The expansion was incremental and by 1999 service was available to the entire county. In 1999, STS also began providing Saturday service, a US 250 corridor service and a summer weekend service.

Funding cuts at both the state and local levels beginning in 2001 led to a reduction in the size of the system's service area and hours or service. In 2002, the City of Sandusky and Erie County capped their contributions to the transit system. The result was that the system reduced its hours and raised its fares for the first time. In 2003, Erie County withdrew its financial support from the transit system after a sales tax levy with funding for transit failed to pass. The system further reduced its service area to the Sandusky City limits and a small area surrounding the city that became known as "Zone Two". "Zone Two" trips were required to start or end in Sandusky. Several bus shelters were added to the system from 2013-2019. In 2018 the system was rebranded, and the name SPARC was discontinued and renamed the Sandusky Transit System's fixed route. Also, during this time routes and stops were reorganized and expanded as well as private contracts with local agencies and organizations. STS continues to internally review operations and expenditures in order to maintain a state of good repair for the transit service, including route changes, fare increases and service hour changes. A 2023 study by HDR and STS was completed examining services and full SWOT analysis. Study outcomes are being used by local leadership to help bolster local transit as a sustained mobility option for the region.

Rural and Urban Transit Designations: The 2000 Census revealed that the densely populated area around the cities of Sandusky and Huron meets the definition of an "urbanized area." With the urbanized area designation, STS transitioned from being a rural transit grantee to a Federal Transit Administration Section 5307 Urban System. To assist with the transition and to help meet the needs of the service area, STS undertook a Transportation Development Plan (TDP) in 2003. Since February 2004, STS began working to implement the recommendations of the TDP. STS expanded the service area to include the entire urbanized area and lifted the requirements that trips in "Zone Two" must begin or end in Zone One. In 2005, STS re-structured its contract with MR/DD which created additional revenue that would be used as a local match for Federal grants. The local match allowed the system to receive more Federal funding and increase its hours of service. In 2005, STS extended its weekday hours and provides service on Saturdays. The 2010 Census revealed that there was a population decline within the urbanized area and that it no longer had enough population to be considered an urban system. The system was re-designated as a rural transit system around 2012. Following the 2020 Census, the region was redesignated as an urban transit system, and reverted back to the 5307 funding program. The transit system formally made the switch in July of 2024. STS in turn moved from an FTA Tier II agency to a Tier I agency. As part of the transition, STS has begun developing a Transit Asset Management (TAM) Plan to help assess the current condition of its capital assets. The plan is expected to be completed in 2025 during the development of the MPO long range plan.

NEW SCHEDULES EFFECTIVE JANUARY 1, 2025

OFF-SEASON SCHEDULE (NOVEMBER 1 - APRIL 30)

Line	Frequency	Days of Operation	Hours of Operation
Blue	30 Mins	7 Days/Week	6am-10:30pm
Red	60 Mins	7 Days/Week	6am-10pm
Yellow	60 Mins	Mon-Sat	6:30am-8:30pm
Purple	60 Mins	Mon-Sat	6am-8pm
Green	60 Mins	Mon-Sat	6am-8pm

Peak Season Schedule (May 1 - October 31)

Line	Frequency	Days of Operation	Hours of Operation
Blue	30 Mins	7 Days/Week	6am-10:30pm
Red	60 Mins	7 Days/Week	6am-10pm
Yellow	60 Mins	7 Days/Week	6:30am-10:30pm
Purple	60 Mins	Mon-Sat	6am-8pm
Green	60 Mins	Mon-Sat	6am-8pm

Figure 5-4.2: Sandusky Transit System Schedule

STS Fixed Route: By 2020, the fixed route system of STS expanded, and it now consists of five different intersecting routes. The fixed route system was previously called SPARC. Schedules for the routes are located online (**see Figure 5-4.2**). Other changes include additional signage at bus stops, shelters at some locations and online tracking capabilities for passengers. Fixed routes costs $2.00 per trip (or $1.00 for elderly/disabled). Time and service vary per route. Fare passes are available for up to 31 days, and available via EZfare app for mobile ticketing or at Sandusky City Hall or transit offices.

Paratransit: Paratransit is another service available through STS. It is available seven days a week from 5 AM to 12:30 AM. The service is available only to qualified individuals who apply. Applications are available online or by request. Eligibility for the program requires an assessment from both STS staff and a healthcare professional. Paratransit service allows eligible riders to be picked up to ¾ a mile in distance from an existing fixed STS route.

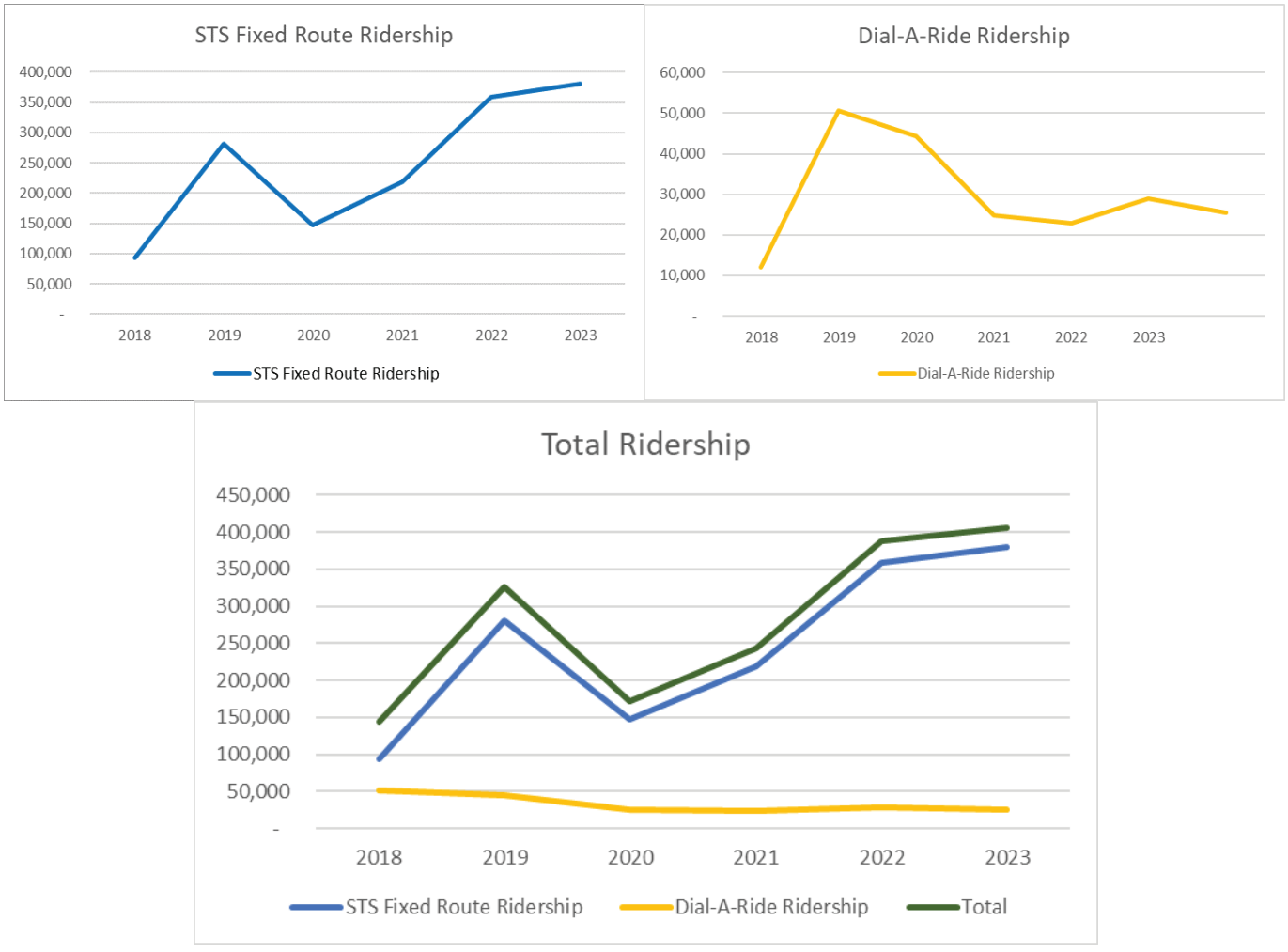
Contract Services: STS has entered into several contracts with local organizations such as Serving Our Seniors, the ECBDD, Erie County Job and Family Services, Cancer Services, Veteran Services, Cedar Point, and Sandusky City Schools.

Dial-A-Ride: STS currently provides a demand response service via reservations only. The service runs Monday through Saturday from 6:00 AM to 10:00 PM. It is open to the general public and there are no restrictions on trip purpose. Trips can be reserved up to two weeks in advance or reserved two days in advance if there is availability. The one-way fare for a trip within the county is $5.00.

Ottawa County Transit Agency (OCTA) provides additional curb-to-curb transportation service in Ottawa County as a 5311 Rural Transit program. OCTA services the area with advanced scheduling for rides and operates daily from 6:00 AM to 9:00 PM. Fares are $4.00 for trips within the county, and rates from $6.00 to $12.00 based on out of county trip distance.

Ridership Numbers: Ridership had been increasing prior to the Covid-19 Pandemic, but had seen a significant decrease in 2020. Ridership has since rebounded and grown past ridership numbers prior to the pandemic, growing from 325,559 rides in 2019 to 405,506 in 2023, primarily in the fixed route ridership. Fixed route ridership was 147,340 riders in 2020, and grown to 380,088 in 2023. Dial-A-Ride had actually decreased from a peak of 50,735 in 2018 to 25,418 in 2023.

Rolling Stock: As of 2023, STS vehicle inventory fleet consisted of 36 vehicles. The buses are mainly used for general public service and service contract service. The general public service is provided using a mixture of sedans and vans. The STS operator, First Transit also owns some of the vehicles that are utilized for transit service.



Figures 5-4.3: STS Fixed Route and Dial-A-Ride Ridership

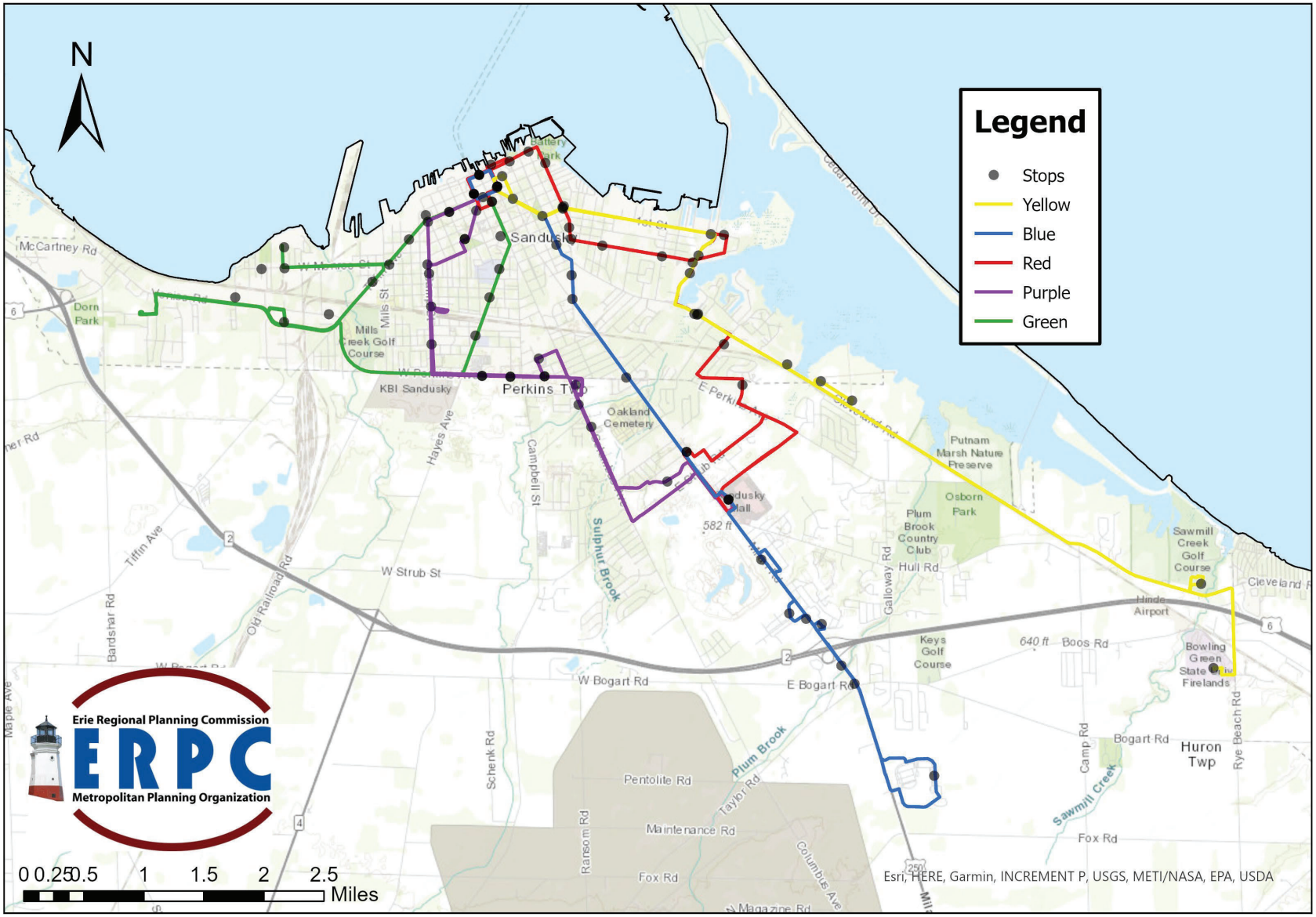


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Figure 5-4.4: STS Fixed Routes

ERPC MPO 2050 Long Range Transportation Plan

5.5 Bicycle/Pedestrian Facilities and Activities

Bicycle and Pedestrian Plan: Bicycle and pedestrian facilities and multi-use use trail systems are valuable community assets, which serve utilitarian transportation and recreational purposes. Over the last couple of decades, many communities around the country have been promoting the use of bicycles and walking as an important transportation component that also serves recreational purposes and encourages healthy living. Similarly, in 1999 ERPC developed a Bicycle and Pedestrian Plan that addressed bicycle and pedestrian education, safety and the creation of bicycle and pedestrian routes throughout the county. The plan has gone through several updates in 2010, 2014 and in 2020. The 2020 plan identifies seven consolidated goals in addition to the recommendation to establish a standing bicycle and pedestrian committee (2015). The committee has been involved in plan updates and other related activities since its inception and meets quarterly. With the addition of Ottawa County into the MPO, ERPC staff have been working with the Ottawa County MetroPark on adding their 2022 Ottawa County Active Transportation Plan into local planning efforts. This includes coordination on projects and funding opportunities to help implement their adopted plan. **Figure 5-5.3** details existing bicycle facilities in the MPO and any ongoing regional planning studies, along with a composite Active Transportation Needs analysis completed by ODOT's Walk.Bike.Ohio Active Transportation Plan in 2020.

Programs: ERPC also promotes active transportation through a variety of activities held throughout the year. ERPC staff has actively been growing its alternative transportation planning activities with events such as Active Transportation Month and active transportation website resources. Staff has also participated in educational outreach activities, and are always looking for new opportunities to promote active transportation locally.

Figure 5-5.1: Active Transportation Website

Safe Routes to School Program: Under the transportation bill SAFETEA-LU the Safe Routes to School (SRTS) program was established. This program has continued under Moving Ahead for Progress in the 21st Century, or MAP-21 which was passed in 2012. The SRTS program is designed to enable community leaders, schools and parents across the nation to improve safety and encourage more children to safely walk and bicycle to school. Locally, the jurisdictions of the Village of Milan, City of Sandusky, City of Huron, City of Vermilion and Perkins Township have developed school travel plans and have all applied for funding through the program.

State and National Bicycle Routes: The Ohio Department of Transportation has also been actively working on designating bicycle routes on both state and national levels. Locally two routes have been identified, including US Bike Route 230 (USBR) that is an alternative route to USBR 30 in Huron County, and the north/south State Bike Route 65.

Sandusky Bay Pathway: The regional trail network continues to grow through coordinated planning efforts between local partners. Beginning in 2018, Sandusky officials worked with Environmental Design Group on the Sandusky Bay Pathway vision that would span across the city of Sandusky. Since the plans

inception, Greater Sandusky Partnership (GSP) has grown the plan to a regional view for the shores and island regions. The updated plan includes connections from Vermilion to Port Clinton and Fremont, and ties in many of the coastal communities in the area. The regional routes are continuing to expand through current construction efforts and planning studies examining future connections.

Figures 5-5.2: ERPC staff conducting a safety training, 2016

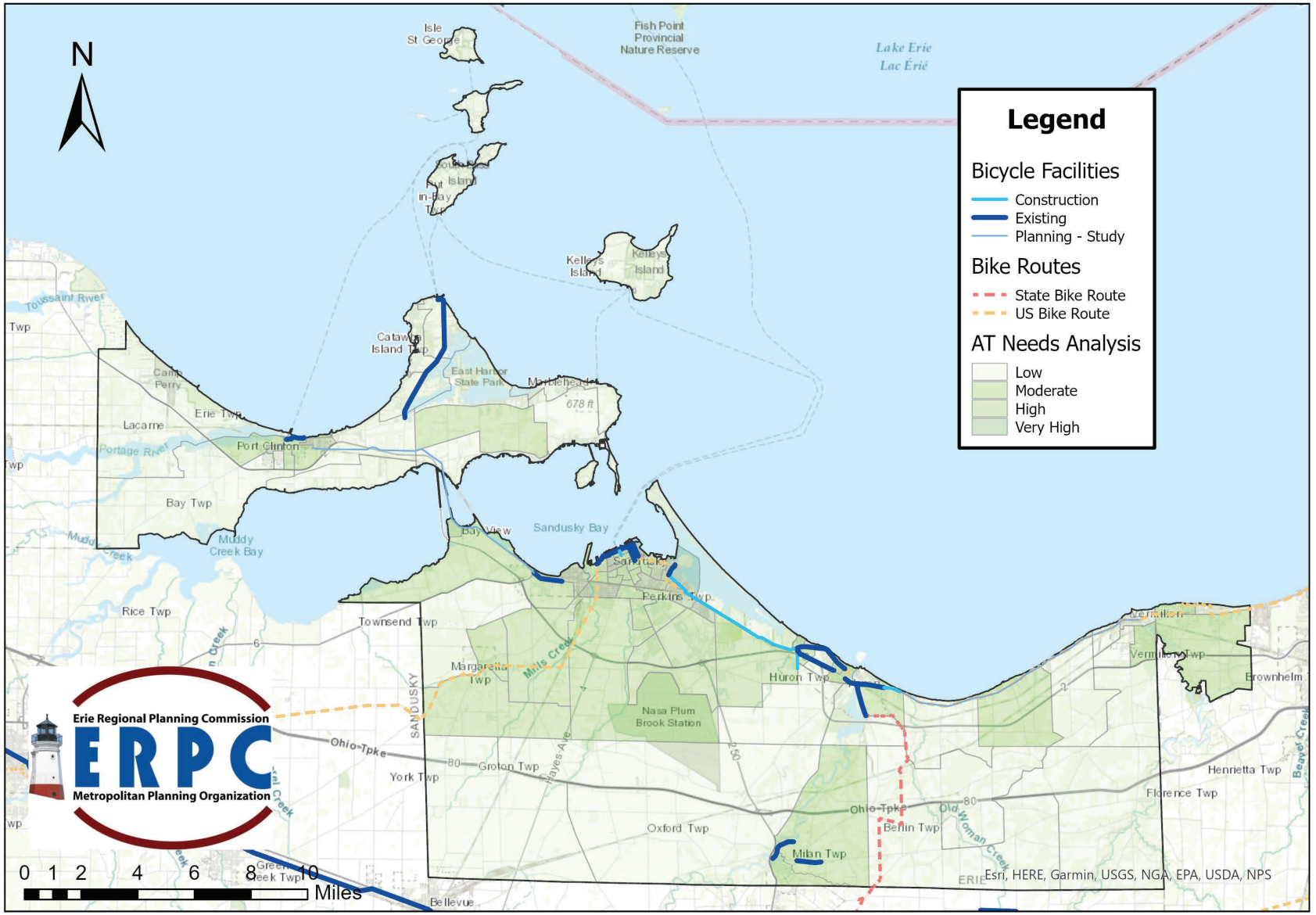

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Figure 5-5.3: Bicycle and Pedestrian Facilities

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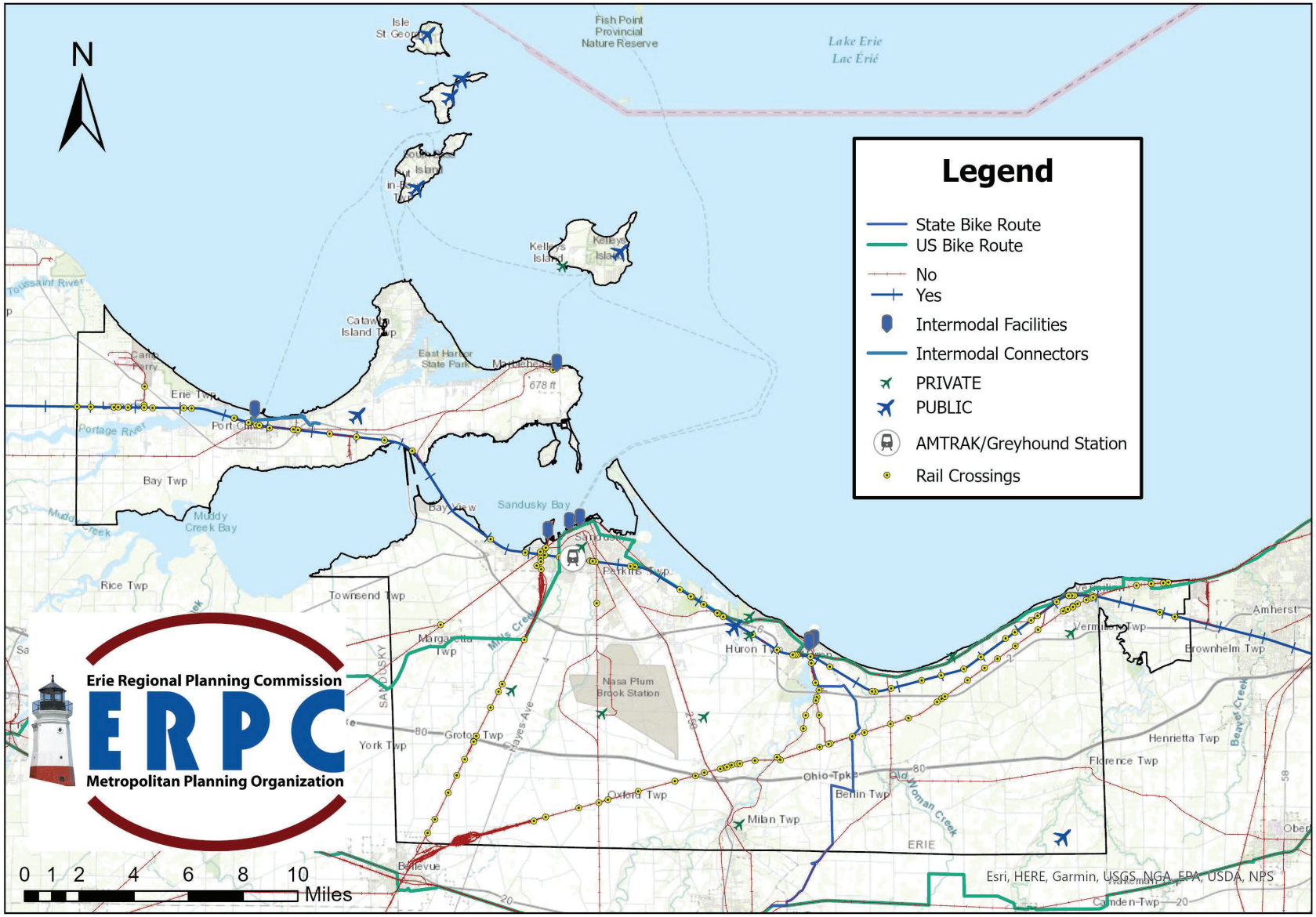

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Figure 5-5.6: Multi-Modal Facilities

ERPC MPO 2050 Long Range Transportation Plan

5.6 Freight and Regional Transportation

Freight: The MPO's freight system is made up of a variety of components including:

- Nearly 190 miles of strategic roads as part of Ohio's Strategic Freight System
- Three commercial ports linked to the world market via the Great Lakes and Norfolk Southern rail
- Three available truck parking facility with Interstate Access, with an additional facility under construction
- Over 552 miles of active rail line run through the planning region owned by Norfolk Southern or Wheeling & Lake Erie, and
- An international general aviation facility east of Port Clinton.

Freight Plan: In 2023, ERPC staff worked alongside with consultants from the Gannet Fleming to update the 2013 ERPC Freight Study. The study provided an assessment of existing conditions for elements of freight transportation and also provided recommendations for freight related improvements specific to Erie County. Group sessions and stakeholder interviews were conducted during the process, which provided additional insight into issues or concerns the freight community might have in regard to the current transportation system.

A survey was conducted during the 2023 study. Many of the surveyed companies not only found the roadway network critical to operations, but also their ability to access and utilize other modes such as rail, water, and air. Responses highlighted a need for improved land use and freight transportation planning, and to promote the region's unique multimodal and intermodal capabilities. Transport Ohio, Ohio's State Freight Plan identified 1,500 freight-reliant businesses, employing over 19,000 individuals in Erie and Ottawa County. Industry data has revealed that the freight industry composition is such that over 35% of the region's total output is generated by freight-oriented industries.

Table 5-6.1: Freight-Oriented Percentages of Total Output

Location	Percentage of Total Output From Freight-Oriented Industries[6]
Erie County, Ohio	42.1%
Ottawa County, Ohio	23.1%
Combined Erie/Ottawa Counties	35.9%

Freight travels in and out of the MPO region by road, rail, air, and water. Though the 2023 freight study did not directly include the updated planning boundaries, similarities in GDP growth and a smaller overall share of the freight reliant industries were used to assume the findings of freight's role in the regional economy would be relatively consistent across the expanded planning area. From the 2023 freight plan, advanced manufacturing, agriculture, construction materials and energy are leading freight commodities in the MPO region. The region is largely a net importer primarily by rail, and trucking is the primary export mode. Below is an overview of the existing transportation facilities that serve the freight industry.

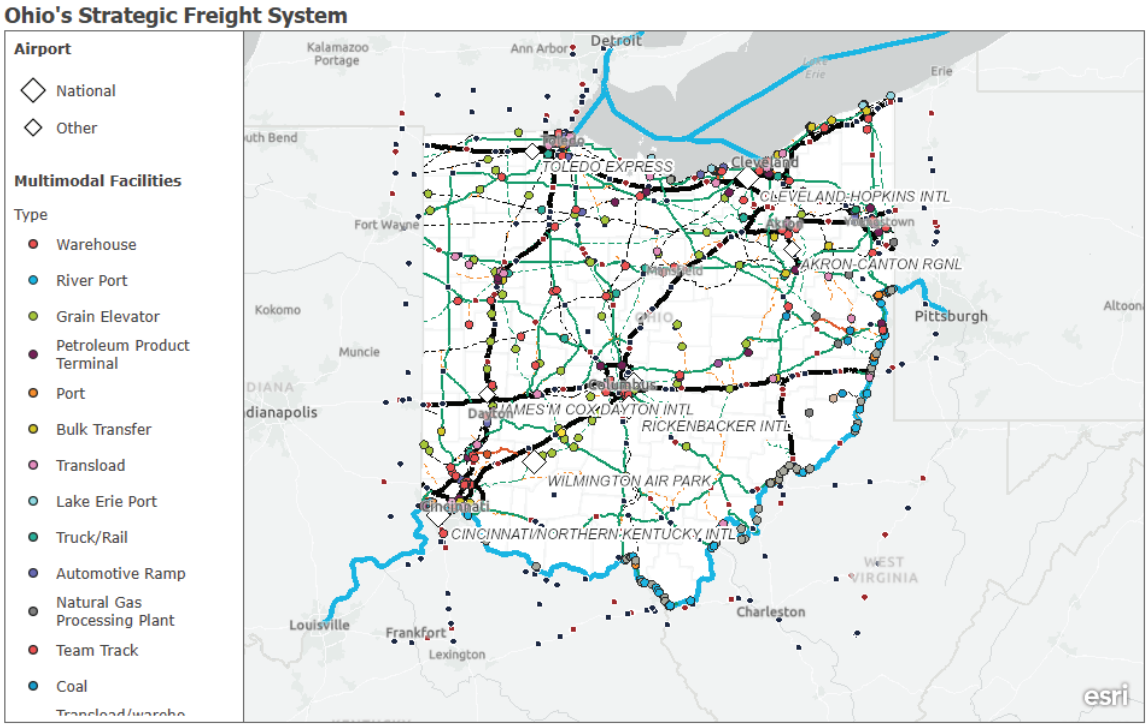
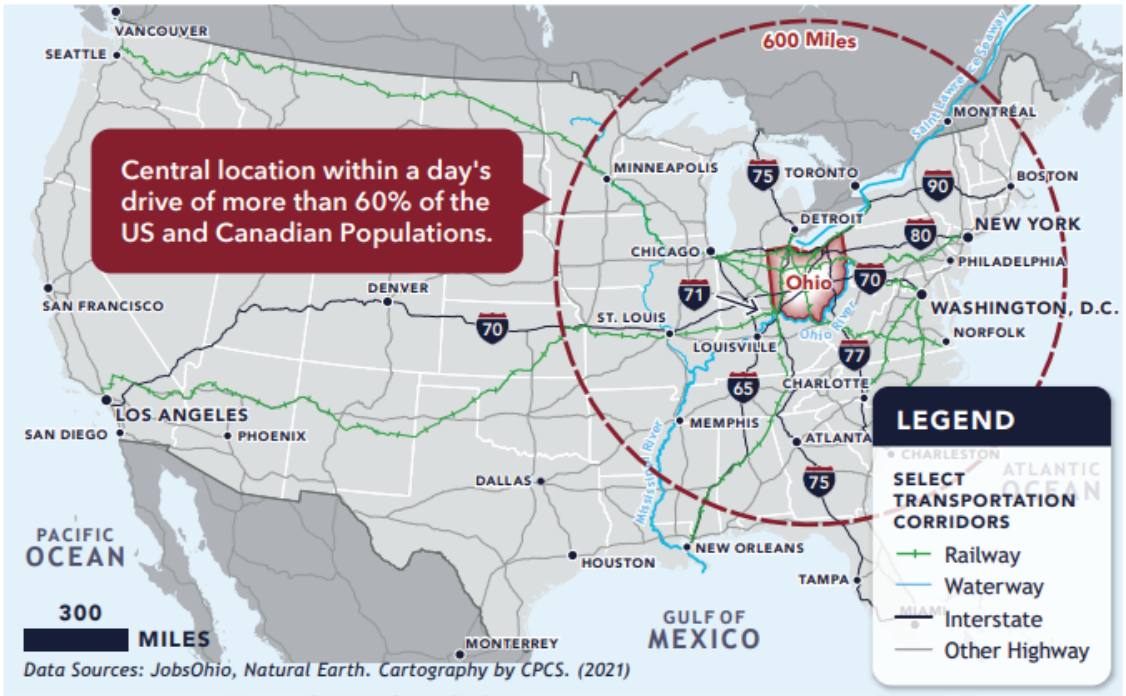


FIGURE 15: FREIGHT MARKET PROXIMITY TO OHIO



Source: CPCS adapted JobsOhio, Logistics and Distribution for a Real-Time Economy (Logistics and Distribution Brochure), 2020

Figure 5-6.1: Ohio's Freight Network[7]

Rail Freight: All active rail lines in the region are owned by Norfolk Southern Corporation (NS)[5] and provide service to major employers in the MPO including the ports of Sandusky and Huron. As of the 2023 Freight Plan, 83% of Erie County rail lines are capable of double-stack clearance. Multiple lines provide support for Amtrak passenger rail service. On average, there are 80 trains per day on the NS rail lines through the study region.

At-grade Rail Crossing: Within the planning area, there are 89 public at-grade rail crossings, with 75 in Erie County, 9 in Ottawa County, and 5 in Lorain County. Rail crossings can be a significant source of traffic delay depending on the number of trains that operate per day across a particular intersection.

Table 5-6.2: Highest Train Traffic at Public At-Grade Rail[6]

Maintaining Agency	Location	Total Daily Through Trains	Annual Average Daily Traffic (AADT)
BAY VIEW	S. Danbury Station Road	96	103
SANDUSKY	Old Street	55	921
VERMILION	Main Street	48	3140
VERMILION	Vermilion Road	48	2558
VERMILION	Adams Street	48	870
VERMILION	Grand Street	48	560
VERMILION	Sunnyside Road	47	725
GYPSUM	Gypsum Road	45	1727
PORT CLINTON	Lightner Road	45	155
SANDUSKY	Edgewater Avenue	44	3054
GYPSUM	Plasterbed Road	43	583
PORT CLINTON	Harbor Road	42	1850
OAK HARBOR	Tettau Road	42	401
OAK HARBOR	Camp Perry Road	42	276
OAK HARBOR	Carroll-Erie Road	42	200

Highway-Rail Grade Crossing Safety Summary: The Public Utilities Commission (PUCO) is responsible for the Rail Grade Crossing Safety Program and allocating the federal funds for rail crossing improvements in Ohio. The level of safety for an individual railroad/roadway crossing is calculated using a Hazard Index. The Hazard index uses data such as at-grade rail accident information, vehicle traffic at the crossing, and number of trains crossing daily and crossing sight distance. Crossings are compared against each other based on the index and assessed for accident risk by PUCO to determine the need for additional rail grade crossing protection.[7]

[8] TIMS, PUCO
[9] TIMS, PUCO
[7] TIMS, PUCO

Airports: ERPC is home to numerous private airfields and eight public airfields. Of the public airfields, five are on the Lake Erie Islands including North, Middle and South Bass, and Kelleys Island. Hinde Airport in Huron and Ortner Airport in Wakeman both are public airports in Erie County. The largest airport in the planning region is the Erie-Ottawa International Airport in Port Clinton, with an asphalt runway at 5,646 feet that can accommodate up to large business jets. A total of 98 aircraft are based at the airport, including 80 single engine, 11 multi engine, and 7 jets. **Figure 5-6.3** details the airport locations below.

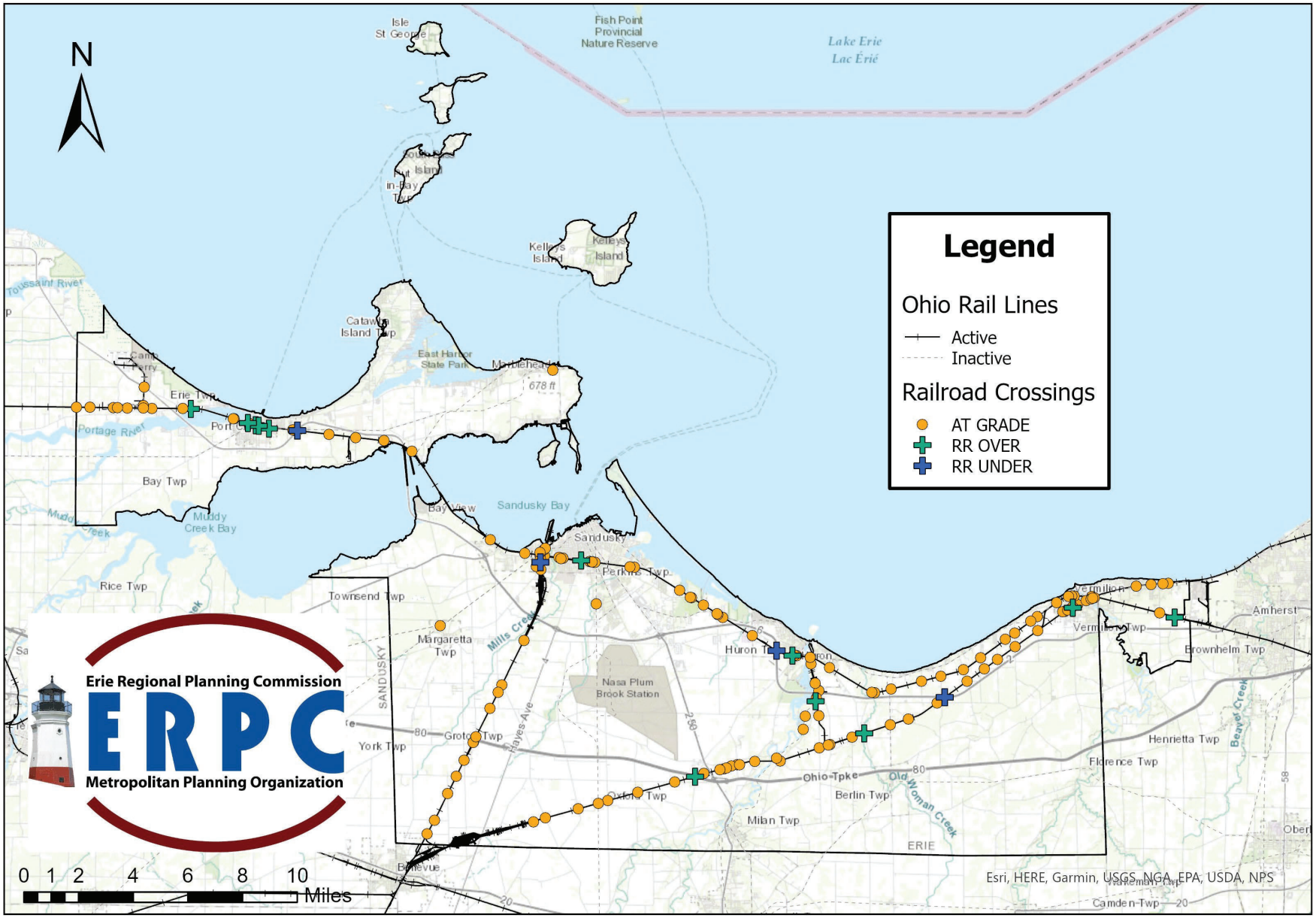


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Figure 5-6.2: Rail Crossings

ERPC MPO 2050 Long Range Transportation Plan

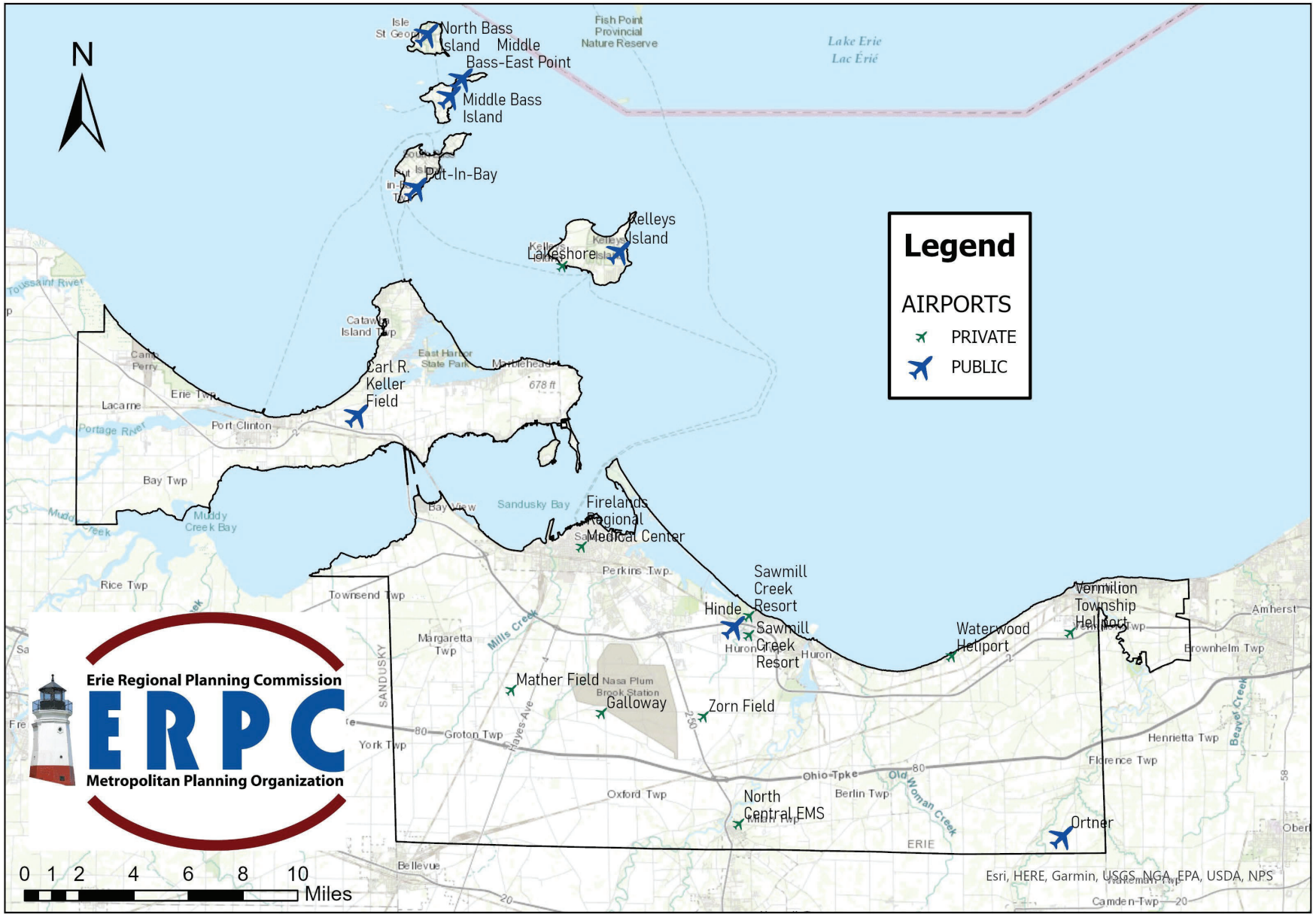

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Figure 5-6.3: Airports

ERPC MPO 2050 Long Range Transportation Plan

Accident History and Prediction: Accident prediction is based on the findings from the Grade Crossing Accident Prediction Report (GXAPS) for Public at-grade highway rail crossings as provided by the Federal Railroad Administration (FRA) Office of Safety Analysis. The accident prediction formula is based on two independent factors: (1. the crossing's physical and operating characteristics and (2. five years of accident history at the crossing. The prediction report highlights potential hazards and indicates conditions that might be dangerous. The results of the accident prediction formula are not extensive enough to use it as a standalone measure of whether a crossing needs additional equipment. Other data is needed for a full evaluation on the safety of a crossing include sight distance, traffic operations, and topography and passenger exposure levels. The top 10 at grade predicted rail accident locations in the ERPC MPO region are listed below according to their rank based on accident prediction values across the state.

Table 5-6.3: Top Ten Predicted Rail Accidents Locations[8]

Predicted Accident Rank, MPO Planning Area	Average Predicted Accidents	City	Street	Total Trains	AADT
1	0.331972	SANDUSKY	PERKINS AVENUE	40	4867
2	0.319651	PORT CLINTON	HARBOR ROAD	42	1850
3	0.120238	SANDUSKY	CAMPBELL STREET	40	5548
4	0.116252	VERMILION	VERMILION ROAD	48	3412
5	0.112614	HURON	WILLIAMS STREET	40	1497
6	0.109727	SHINROCK	CEYLON ROAD	40	2220
7	0.10631	PORT CLINTON	CAMP PERRY ROAD	42	276
8	0.103371	BERLIN HEIGHTS	JOPPA ROAD	16	285
9	0.011118	HURON	MAIN STREET	40	7529
10	0.010448	VERMILION	MAIN STREET	48	3140

Table 5-6.4: 2021-2023 ERPC MPO Grade Crossing Crashes[9]

Crossing Number	RR	City	Highway	Date	Fatalities	Injuries
509271S	NS	Port Clinton	Harbor Road	12/23/2023	0	0
509271S	NS	Port Clinton	Harbor Road	11/4/2022	0	0
524067F	NS	Sandusky	Campbell Street	8/26/2022	1	0
509274M	NS	Port Clinton	Camp Perry Road	6/14/2022	0	0
524037N	NS	Vermilion	Vermilion Road	11/9/2021	0	0
472318B	NS	Berlin Heights	Joppa Road	10/8/2021	0	0
524057A	NS	Huron	Williams Street	10/5/2021	1	0
524062W	NS	Sandusky	Perkins Avenue	6/25/2021	0	0

[8] Grade Crossing Accident Prediction System (GXAPS), Federal Railroad Administration, Accessed 2024
[9] Grade Crossing Accident Prediction System (GXAPS), Federal Railroad Administration, Accessed 2024

Table 5-6.5: 2014-2024 Grade Crossing Crashes Railroad Accident History[10]

Year	Total Crashes	Fatal Crashes	Injury Crashes	Total Fatalities	Total Injured	Crossing Number(s)	Location of Fatal Crashes
2014	3	-	2	-	2	524037N	
2015	4	2	-	2	-	524059N, 524063D, 524051J, 524054E	Rye Beach Road (Huron Township), Berlin Road (Huron)
2016	0	-	-	-	-	-	-
2017	0	-	-	-	-		
2018	2	1	-	1	-	481665W, 524070N	Bogart Road, (Perkins Township)
2019	2	1	-	1	-	524053X, 509271S	Ceylon Road (Shinrock)
2020	2	-	-	-	-	524062W	-
2021	4	1	-	1	-	524057A, 524037N, 472318B, 524062W	Williams Street (Huron)
2022	3	1	-	1	-	509274M, 524067F, 509271S	Campbell Street (Sandusky)
2023	1	-	-	-	-	509271S	
2024	1	1	-	1	-	524070N	Mills Street (Sandusky)
Totals	**22**	**7**	**2**	**7**	**2**		

Regional Passenger: The regional passenger transportation system consists of Greyhound and Amtrak rail services.

Passenger Rail: AMTRAK provides daily passenger rail service to the MPO area. The AMTRAK station is located at the transit hub on Depot Street. This hub also houses STS and Greyhound. AMTRAK station services in Sandusky include access to restrooms and payphones during station hours. Two routes run through Sandusky, including the Capitol Limited Route from Washington D.C. to Chicago, and the Lake Shore Limited Route between New York City, Boston, and Chicago.

[10] Grade Crossing Accident Prediction System (GXAPS), Federal Railroad Administration, Accessed 2024

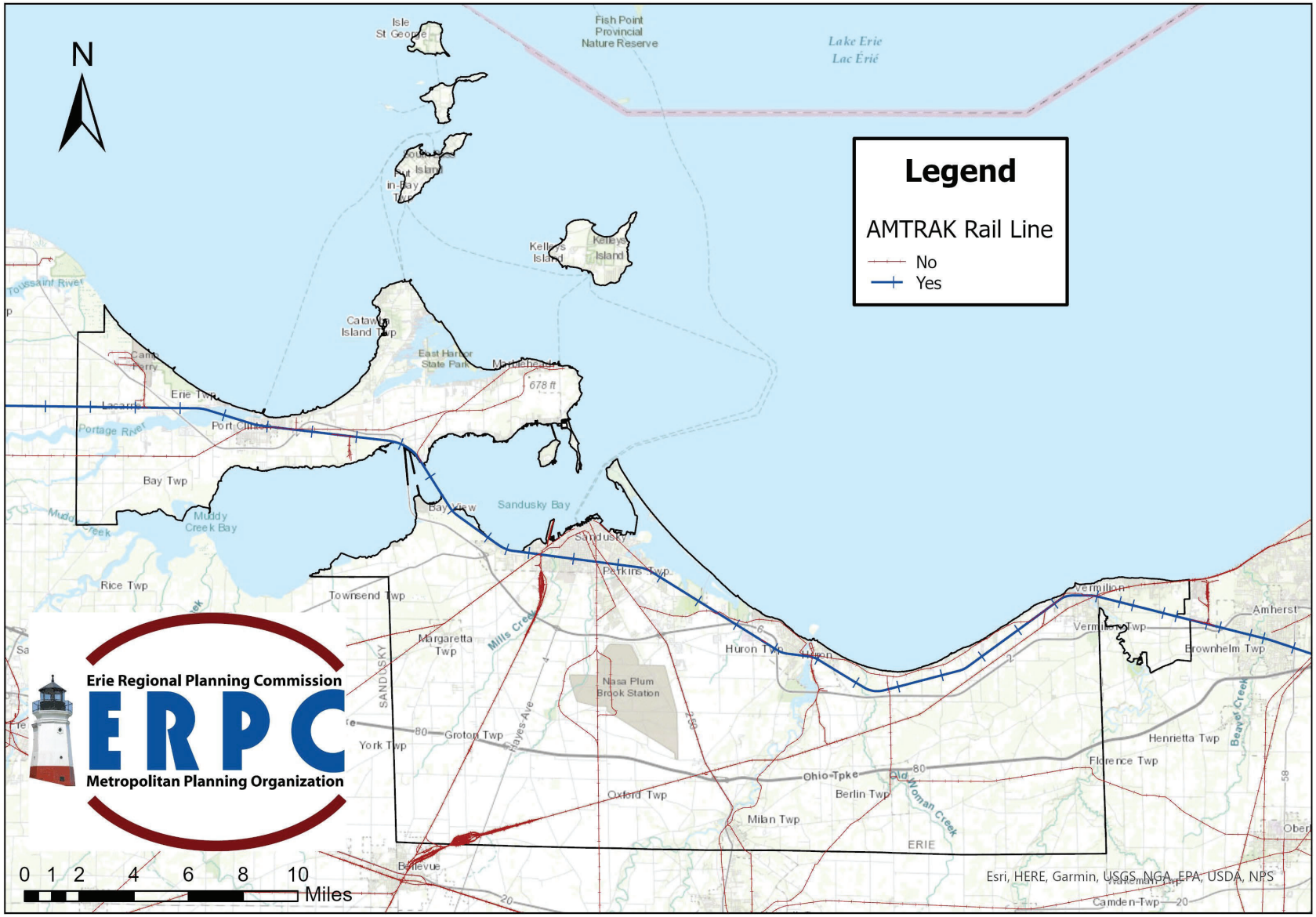

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Figure 5-6.2: AMTRAK RAIL

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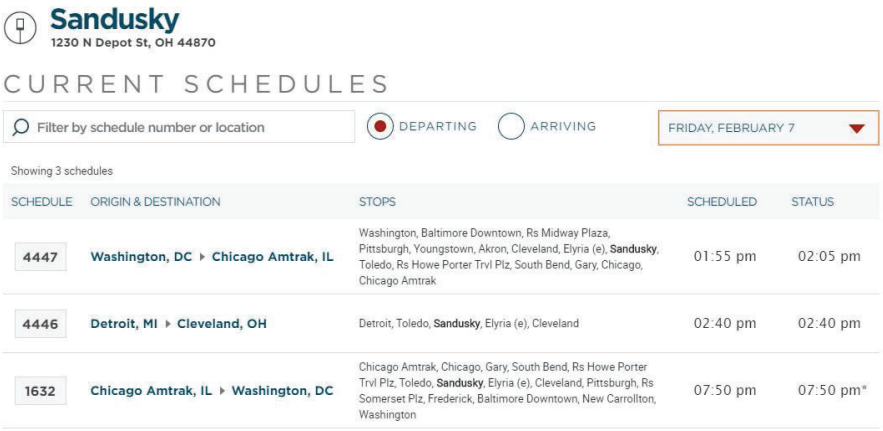
Bus Service: The Greyhound Bus Corporation provides regional bus service to the MPO area. The Sandusky Greyhound bus terminal provides full-service ticketing and package express service. Two lines operate through Sandusky daily, including from Detroit to New York, and Chicago to Washington D.C. The intercity bus terminal is located at the transit hub on Depot Street with STS and AMTRAK.



Sandusky
1230 N Depot St, OH 44870

CURRENT SCHEDULES

Filter by schedule number or location | DEPARTING | ARRIVING | FRIDAY, FEBRUARY 7

Showing 3 schedules

SCHEDULE	ORIGIN & DESTINATION	STOPS	SCHEDULED	STATUS
4447	Washington, DC ▸ Chicago Amtrak, IL	Washington, Baltimore Downtown, Rs Midway Plaza, Pittsburgh, Youngstown, Akron, Cleveland, Elyria (e), **Sandusky**, Toledo, Rs Howe Porter Trvl Plz, South Bend, Gary, Chicago, Chicago Amtrak	01:55 pm	02:05 pm
4446	Detroit, MI ▸ Cleveland, OH	Detroit, Toledo, **Sandusky**, Elyria (e), Cleveland	02:40 pm	02:40 pm
1632	Chicago Amtrak, IL ▸ Washington, DC	Chicago Amtrak, Chicago, Gary, South Bend, Rs Howe Porter Trvl Plz, Toledo, **Sandusky**, Elyria (e), Cleveland, Pittsburgh, Rs Somerset Plz, Frederick, Baltimore Downtown, New Carrollton, Washington	07:50 pm	07:50 pm*

Figure 5-6.3: Greyhound local bus schedule[11]

Intermodal Facilities and Connectors: The US Department of Transportation permits the designation of intermodal connectors, or roads, leading to intermodal terminal facilities, where freight is transferred between modes. These intermodal connectors are critical components to the National Highway System (NHS), and provide for the efficient mobility of goods and products vital to the national, state, regional and local economies. The planning region has eight multimodal facilities, including Standard Slag Co. in Marblehead and Triple Crown facility in Sandusky. Five facilities have been identified by FHWA as active Intermodal Facilities, which are listed below:[12]

FHWA Name	Facility	Type	Address	City
OH 12P	Norfolk and Southern, Sandusky Coal Docks	Port Terminal	2705 W. Monroe Street	Sandusky
OH 13P	Geo Gradel Salt Dock	Port Terminal	931 W Walter Street	Sandusky
OH14F	Port of Sandusky/Jackson Pier	Ferry Terminal	101 W. Shoreline Drive	Sandusky
OH15P	Huron Limestone Co.	Port Terminal	105 E. Cleveland Road	Huron
OH9F	Port Clinton Jet Express Terminal	Ferry Terminal	3 N. Monroe Street	Port Clinton

Figures 5-6.4: Intermodal Facilities

[11] http://bustracker.greyhound.com/stops/250954/Sandusky_OH/departing
[12] Transport Ohio, Strategic Freight System Dashboard, Accessed 10/24

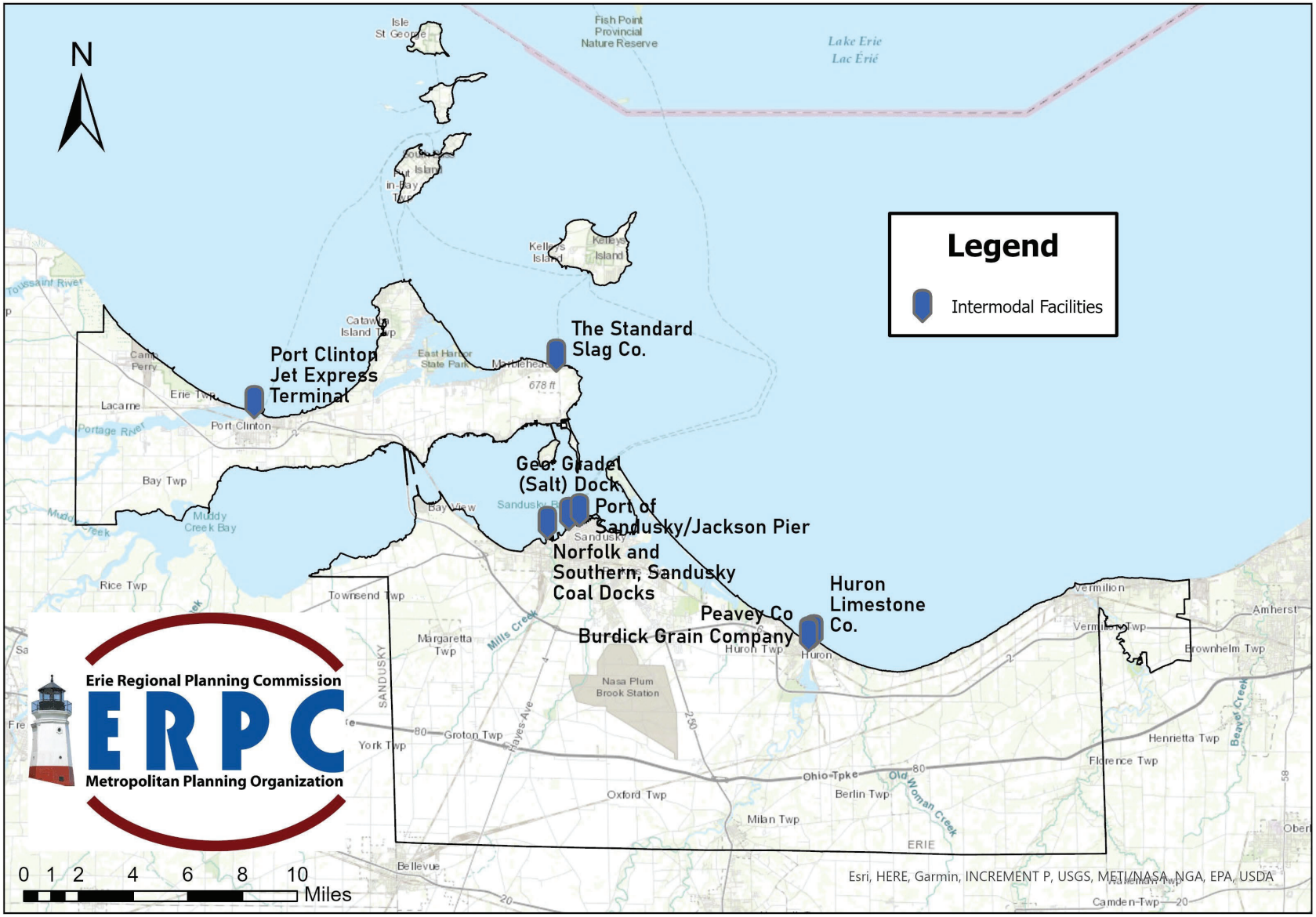


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Figure 5-6.4: Intermodal Facilities

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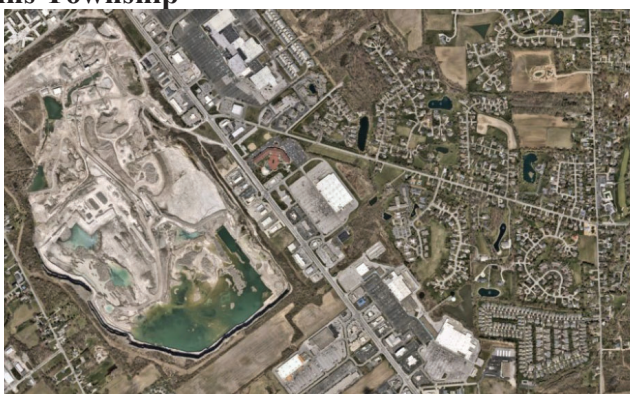
5.7 Land Use

Land Use Changes: Existing and future land uses of each community within ERPC MPO are an important consideration in determining transportation needs. Transportation systems and land use patterns have a well-documented reciprocal relationship. As communities have grown, the demands for transportation system improvements have also grown. However, these transportation improvements have also provided more convenient access to land farther out, thus spurring further growth. More than any other transportation system, it has been the road network and the prevalence of the automobile that has impacted land use patterns over the past half-century. For example, the transportation demands of US 250 have changed tremendously since 1958. The corridor has undergone a dramatic change from a rural route to an urban hub as seen in the photos below. This has occurred in many different portions of the planning area (see **Figure 5-7.1**).

US 250 in Perkins Township

1958



2025[13]

US 6 in Sandusky and Perkins Township

2001

2025[14]

[13] Erie County Auditor's Office
[14] Erie County Auditor's Office

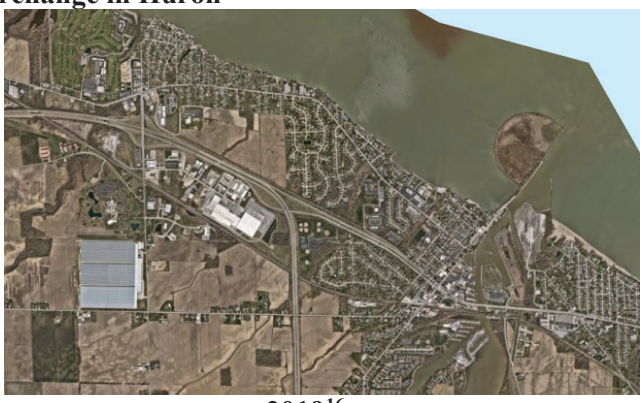
SR 53 in Catawba Township

2002

2023[15]

US 6 and SR 2 Interchange in Huron

2001



2019[16]

Figure 5-7.1: Land Use Changes Over Time

5.8 Port Facilities

Local Ports: Of the 13 ports along Lake Erie in Ohio, 7 ports exist within the ERPC planning region. Each port provides different level services including freight capacity and passenger service. Of the 7 ports in the region, 6 are designated by legislation, and therefore categorized by the United States Army Core of Engineers as principal ports.[20]

Figure 5-8.1: Port tonnages (2022)[17]

[15] Ottawa County Auditor's Office
[16] Erie County Auditor's Office
[20] Ohio Maritime Plan, 2024

The following ports are all categorized as primary passenger ports, providing ferry services and cargo handling to the various islands in Lake Erie's western end. The Put-In-Bay Harbor offers cargo handling and passenger service, and provides a crucial connection to the largely tourist populations on the Lake Erie Islands. The Port Clinton Harbor offers passenger service to and from the Lake Erie Islands as well. The Port of Kelley's Island had previously handled freight for the Kellstone Quarry located on the island, but after the quarry ceased operations in the early 2000's, the port now only provides passenger service. The Port at Lakeside is a legislatively designated port, but provides no services for passengers, freight or cargo.

The following three ports, Huron Harbor, Marblehead, and Sandusky, are all freight ports on Lake Erie that have legislative designations, currently or have previously handled freight, and continue to have active freight docks. The US Army Corps of Engineers (USACE) maintains these harbors to a depth of typically 28 feet. Bulk cargoes such as **coal**, iron ore and stone make up more than 90% of Ohio's Lake Erie port traffic.

- The **Port of Huron** is a deep draft commercial harbor that has largely reduced its operations, and has been reduced in Port Category to a Secondary Freight Port. Although the harbor still has one active freight dock, cargo handling has diminished over the years, with no commercial tonnage recorded beginning in 2021. USACE has reduced the dredge depth of the harbor to 14 feet, and continues to support the harbor as the city of Huron continues to reshape its waterfront away from commercial freight handling.

- The **Marblehead Port** is primarily limestone shipping port with one active freight dock that will occasionally hand other types of cargo from nearby Lake Erie ports. The port and its docks are operated by Holcim. The facility is largely shipping outbound materials to the St. Lawrence Seaway and other regional ports, with limited imports ever occurring at the port. The USACE waterborne commerce statistics center reports 2.3 million tons of freight handled in 2022, with 2.6 million tons averaged over the last 10 years due to domestic market fluctuations in limestone pricing.

- The **Sandusky Port** is one of Ohio's key ports for movement of Appalachian coal and minerals. The primary freight dock is the Sandusky coal dock, owned and operated by the Norfolk Southern Corporation. Two additional freight docks The port handles large volumes of bulk commodities. Sandusky's major commodity is coal, representing over 95% of the volume handled at the port. In 2015, Norfolk Southern scaled back its operations in the City of Ashtabula and consolidated them with Sandusky's. The domestic-international split, by volume, for 2022 was 52% domestic and 48% international. The port primarily serves as an exporting port; in that approximately 88% of the volumes of goods handled are exported.[18] The facility has an average loading capacity of 2,600 tons per hour and accommodates vessels with a maximum length of 1,000 feet. The channel depths range from 21to 26 feet. The facility is in operation April through December, 24 hours a day, seven days a week. The harbor ships upwards of 1.5 million tons of coal outbound annually, and

[17] Ohio Maritime Plan,
[18] USACE Waterborne Commerce Statistics Center: Tonnage for selected U.S. ports in 2022

totals 1.8 million of short tons handled in 2022. Over the last ten years, the port has handled 2.4 million tons on average.[19]

In 2023, ERPC worked with Gannet Fleming to update the regional freight plan for the Erie County planning area. The following were potential freight priority investments identified in the planning process.

P-1: Improve private shipping and intermodal connectivity at the Port in Sandusky Bay
P-2: Designate land uses clearly along the waterfront areas. Incorporate environmentally sensitive standards as well as aesthetic and design standards.
P-3: Create clear and safe wayfinding signage for freight traffic. Identify the port areas that would benefit from good signage.
P-4: Upgrade the two unused docks in the City of Sandusky to safely accommodate active freight services.

5.9 Intelligent Transportation Systems (ITS)

Intelligent Transportation Systems: As a thriving tourist area, visitors to Port Clinton across to Vermilion may be unfamiliar with the layout of the cities. For example, the largest numbers of visitors are trying to find their way to the Cedar Point amusement park on the north end of the city of Sandusky, but revitalization efforts in the downtown region is starting to create the need for an overall system to help provide visitors with accurate directions and information about events taking place within the city. Addressing these needs can be accomplished through careful planning and placement of Intelligent Transportation System (ITS) technology throughout the region's transportation infrastructure.

The region is continuing to expand its deployment of ITS technology. This provides a great opportunity to ensure that all future deployments fall under an overall system plan. Through planning, each piece of hardware or software can be utilized to its fullest potential because careful thought was put into the purpose and placement of the technology. The needs of traveler information and way-finding directions to drivers while en-route suggests the use of permanently mounted Variable Message Signs (VMS) as the main piece of ITS technology deployed. For example, in the past, the City of Sandusky had completed a study investigating the overall signage used to direct visitors throughout the Sandusky area. The study examined the signage that existed and also investigated what deficiencies existed in the current system. The three types of signs highlighted by this report (gateway, directional, and seasonal festive banners) can be replaced or supplemented by VMS at strategic locations.

Gateway signs are signs that welcome people into the region. Previously, it was typical for a municipality to only use green highway signs that define jurisdictional boundaries. Larger gateway signs that make the entrance to an area continue to supplement these signs to aid in wayfinding. These structures are distinguished from other types of signs through aesthetic materials, colors, and design that establishes a brand for the area. While static signage exists,

Figure 5-9.1 US 250 at SR 2 Gateway Sign

[19] Ohio Maritime Plan, Accessed October 2024

larger signs can display more seasonally appropriate messages about current events or festivals. Area townships, including Perkins and Huron, have electronic billboards with contextually local aesthetics to help define the municipality for tourist traffic. Gateway signage has been utilized at the interchange between US 250 and SR 2, a heavily trafficked area for tourists, welcoming them to the "Shores & Islands" region.

Directional signs help travelers get to a particular destination. Static, retro-reflective signs can easily blend into the background of all other street and business signs along the roadside. Instead, mounting smaller VMS on light poles or traffic lights would stand out much more while performing multiple functions. These signs could display words and arrow directions to assist drivers towards multiple destinations. The same sign could be used to show the direction of the amusement park and the downtown district by simply alternating between the messages displayed. Visitors would recognize these directions more easily than small static signs. A select number of VMS could be added at strategic locations to inform visitors to the amusement park of additional destinations within the region. At stoplights or other key locations, the messages could be alternated to provide more information than could be displayed on a static banner.

In addition to their main purpose, all these VMS signs can be used to provide additional traveler information beyond the route guidance function. These signs can be used to announce closures or delays due to incidents, detours because of construction, or Amber Alerts to the community. Controlling these signs does not require a significant investment in technology. Advances in technology over the last few months now allow signs to be controlled via a webpage. All that is required to update the messages displayed on the sign is the username and password to a secure webpage. The convenience and multiple uses of VMS make them a great ITS technology to begin building an overall traffic management system.

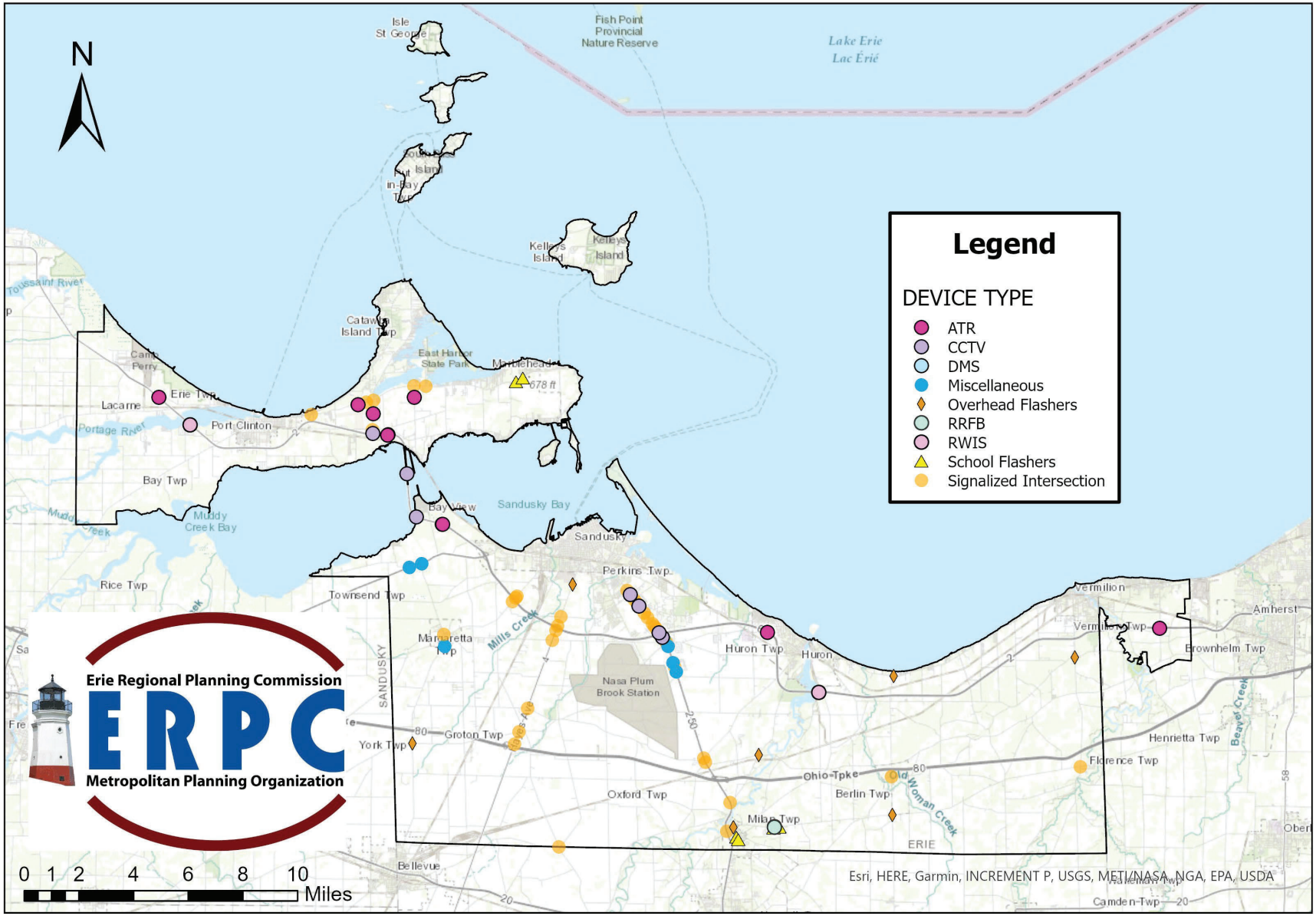


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Figure 5-9.2: ODOT Intelligent Transportation System Inventory

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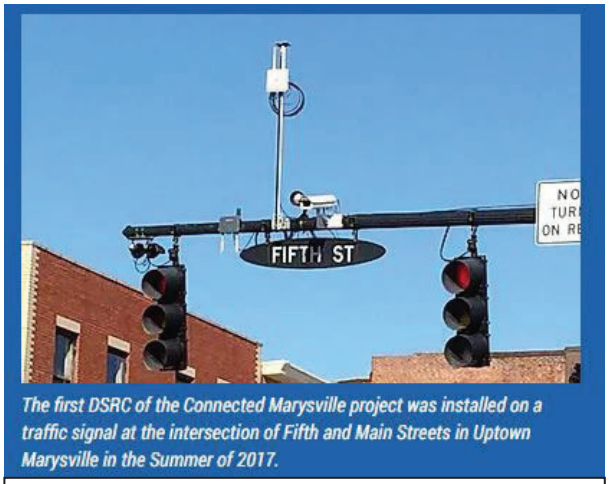
Autonomous Vehicles: Although there are currently no autonomous vehicle structures in place yet in the planning region, it is expected that there will be in the future. Previous testing included truck platooning on the Ohio Turnpike, resulting in a nearly $1.5 million infrastructure investment. Ohio Turnpike for truck platooning with over $1.46 million already being invested in infrastructure.[20] Platooning involves creating pairs of semi-autonomous commercial trucks. Vehicle-to-vehicle communication allows the vehicles to travel close together, which reduces fuel burn and cuts wind resistance. In 2024, DriveOhio's Rural Automated Driving System (ADS) utilized USDOT grant funds to study automated vehicles in rural settings in 32 Ohio counties. The study was crucial in recording and analyzing data and transportation systems analysis to help inform future development and improvement of ADS technologies.[25] Extensive and ongoing research is being conducted by ODOT, The Ohio State University, and at the Transportation research Center 4,500 acre research complex in East Liberty, Ohio.

Figure 5-9.3: DriveOhio Rural Automated Driving Systems, Accessed October 2024

Volkswagen Emissions Settlement and Alternative Energy: In 2016 the United States sued Volkswagen and associated companies for installing defeat devices on some diesel vehicles (2009-2016). It was estimated that 350 tons of excess nitrogen oxide which was emitted in Ohio as a result. The State of Ohio received $75 million over 15 years to install electric vehicle charging stations and diesel fleet replacements through select counties. Eligible applicants include public and private fleet owners of school and transit buses, medium and heavy-duty trucks, switcher locomotives, tugboats, ferries, and cargo handling equipment in airports and ports. The ERPC planning area was listed as a secondary priority for funding through the Diesel Mitigation Trust Fund. As of early 2020, several organizations were listed as having received funding though the program. The Erie County's Engineer's Office received funds to replace a diesel truck. The Ohio Turnpike has also received funds to replace truck that run within Erie County as well as the Ottawa County Transit Agency.



The first DSRC of the Connected Marysville project was installed on a traffic signal at the intersection of Fifth and Main Streets in Uptown Marysville in the Summer of 2017.

Figure 5-9.4: Dedicated Short-Range

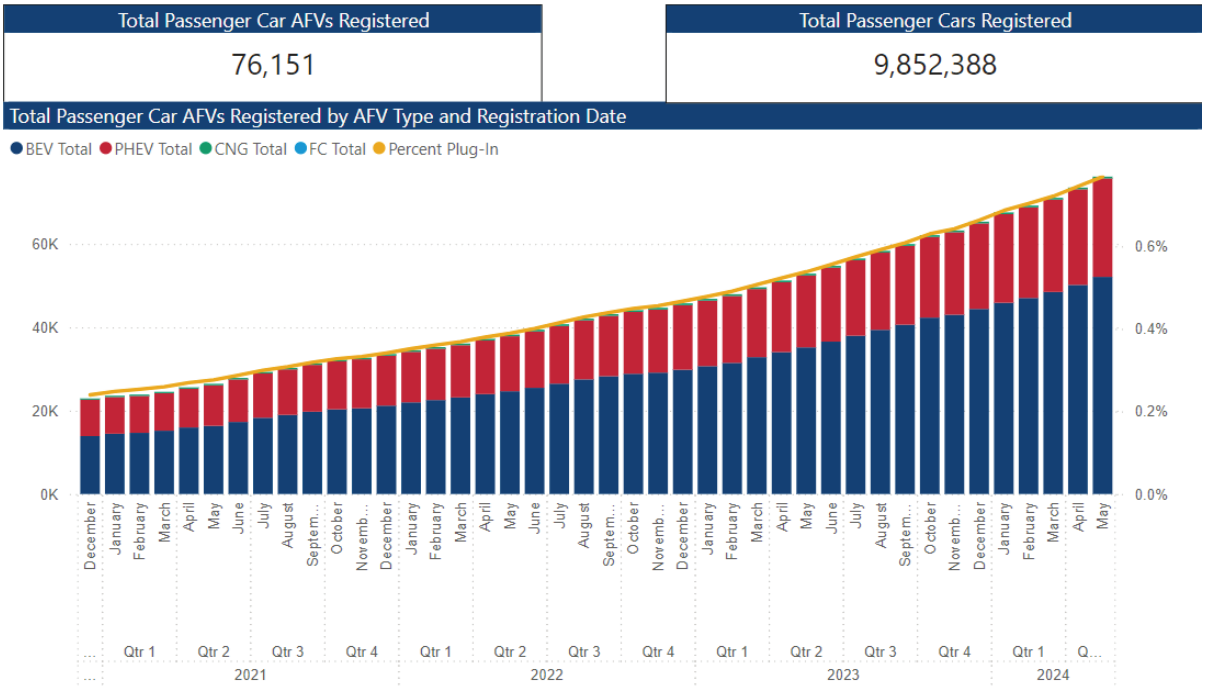
[20] https://www.govtech.com/fs/infrastructure/Ohio-Turnpike-OKs-Smart-Car-Network-Buildout.html
[25] https://drive.ohio.gov/about-driveohio/news/ruralads

Electric Vehicle Infrastructure: Ohio has been seeing an increased adoption rate and growth in alternative fuel vehicles (AFVs). With the growing number of electric vehicles (EV), the state of Ohio and ERPC has been working to expand its electric vehicle charging capacity. In 2019 the Ohio EPA opened up funding for electric charging stations, followed by ODOT staff speaking with ERPC planning area members about funding opportunities. Following its adoption in 2021, part of the Bipartisan Infrastructure Law was the National Electric Vehicle Infrastructure (NEVI) Formula Program. The goal of NEVI is to expand charging station access to 500,000 EV charges by 2030. The formula program allocated $140,000,000 to Ohio over the course of the 5-year program, and is being administered by DriveOhio and their Ohio Electric Vehicle Infrastructure Deployment Plan. With the MPO's access to I-80/I-90, an alternative fuel corridor, paired with the region's tourist destinations, access to electric vehicle charging stations are expected to grow over the next decade.

As of early 2020 there are currently fourteen EV charging stations in the planning region with Level 2 and Level 3 (DC Fast) charging.

Station Name	Street Address	City	Level 2 Charger	Level 3 (DC Fast)	EV Network
McDonald's	18 NE Catawba Rd	Port Clinton	1		Non-Networked
Meijer	4702 Milan Road	Sandusky		10	Tesla
Motel 6	601 Rye Beach Rd	Huron	2		Tesla Destination
Motel 6	11406 U.S. 250 N	Milan	4		Tesla Destination
Holiday Inn Express & Suites Sandusky	1515 Cedar Point Dr	Sandusky	2		Tesla Destination
Catawba Island Club	4235 Beach Club Road	Port Clinton	2		Tesla Destination
Milan Village - Village Charger	1 W Front St	Milan	2		ChargePoint Network
Valley Ford of Huron	55 Cleveland Rd E	Huron	1		Non-Networked
Port Clinton Ford	2155 Gill Road	Port Clinton	1		Blink Network
Friendship Kitchen 83	4024 Hayes Ave.	Sandusky		4	EV Connect
Friendship Kitchen 70	3800 E. State Rd.	Port Clinton		4	EV Connect
Foster Cadillac	2504 HAYES AVE.	Sandusky		1	EV Connect
Mathews Ford S7	610 East Perkins Avenue	Sandusky	2		Blink Network
Mathews Ford Sandusky DCFC's	610 East Perkins Avenue	Sandusky		1	Blink Network

According to DriveOhio, adoption rates for AFV continues to grow. Adoption rate is the percent of vehicles being sold that EVs. While the overall adoption rate remains low at less than 1%, the overall rate of growth is expected to continue as future electric vehicle infrastructure, including availability in models and charging facilities, continues to grow.



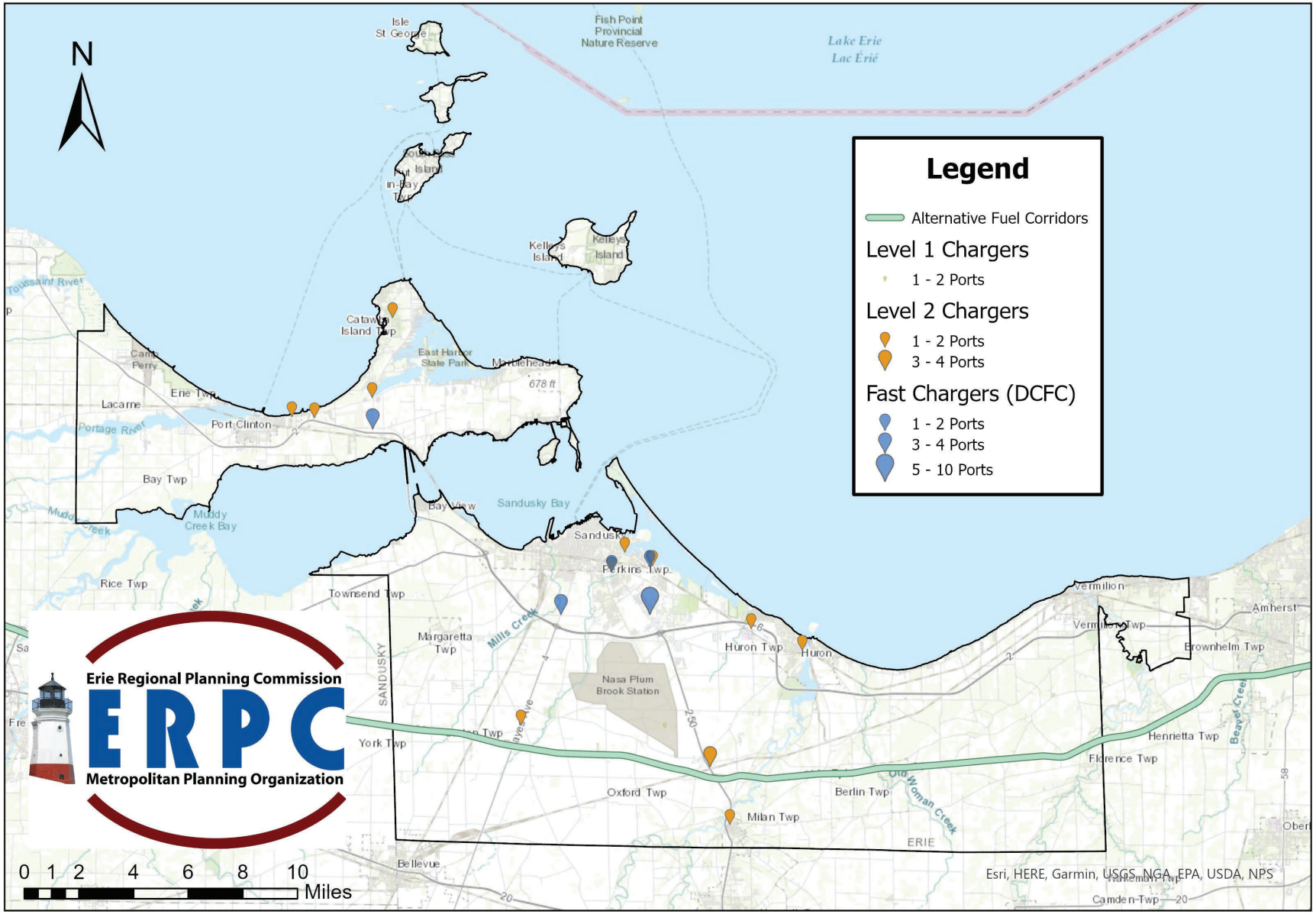


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Figure 5-9.4: Alternative Fuel Stations & Corridor

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Alternative Energy Sources: Alternative energy sources such as biofuels, solar and wind power and natural gas have advanced in the market with changes in technology and government regulations. There is increased attention to liquefied natural gas (LNG) and compressed natural gas (CNG) as power sources for freight transportation. This change has been slow because few fueling stations are available around the US. It may be years before a shift to alternative fuels is widespread. Locally, transit options for alternative energy sources have begun to appear in the transit system. OCTA in Ottawa County currently has a vehicle operating on LNG, with both STS and OCTA considering long term options for future alternative energy adoptions. However, with more energy efficient vehicles potentially fueled by energy sources other than diesel, less revenue may be collected via the motor fuel tax. This could result in less funding for transportation system infrastructure.[21] As of early 2020 the nearest alternative fuel stations have E85, NPG and Biodiesel stations are located in Huron County in Norwalk, just south of the Village of Milan.[22]

5.10 Environmental

Environmental Impact and Mitigation Practices: Although the ERPC MPO is not directly involved with projects, it does supports pro-environmental practices though the use of its project scoring sheets. Points are awarded favorably towards projects that demonstrate pro-environmental practices. Topics such as environmental justice, preservation and impacts are all considered during this process.

All ERPC MPO funded projects are required to follow the Ohio Department of Transportation's environmental review process. Once a project is funded through the MPO project selection committee, the project sponsors can choose to administer their project themselves or have ODOT administer it. If the project sponsor is conducting administering the project they would hire a pre-approved environmental consultant to complete the various environmental task and prepare a NEPA document for district review and approval. If ODOT is administering the program the district would complete the environmental studies or task them thru OES-Task Order Consultant and then the district would still review and approve the NEPA document. Regardless of who administers the project the same environmental items are required to be considered and reported. The following sections will describe ODOT's general mitigation process and any locally relevant MPO related processes. Due to the technical nature of environmental laws and regulations, it is noted that the specific processes differ depending on a project's scope and location and are not always applicable.

The ODOT environmental program (EP) staff ensures that any transportation project that affects publicly owned parks, recreational areas, wildlife/waterfowl refuges, or public and private sites using federal funds are formally investigated and documented according to the National Environmental Policy Act (NEPA). The EP staff also provides guidance and technical assistance, undertakes site investigations and directly communicates with the USEPA and Ohio EPA.

[21] http://www.dot.state.oh.us/Divisions/Planning/SPR/StatewidePlanning/Documents/ODOT_FreightPlan_Updated%203.7.19.pdf
[22] http://www.altfuelprices.com/station_map.php

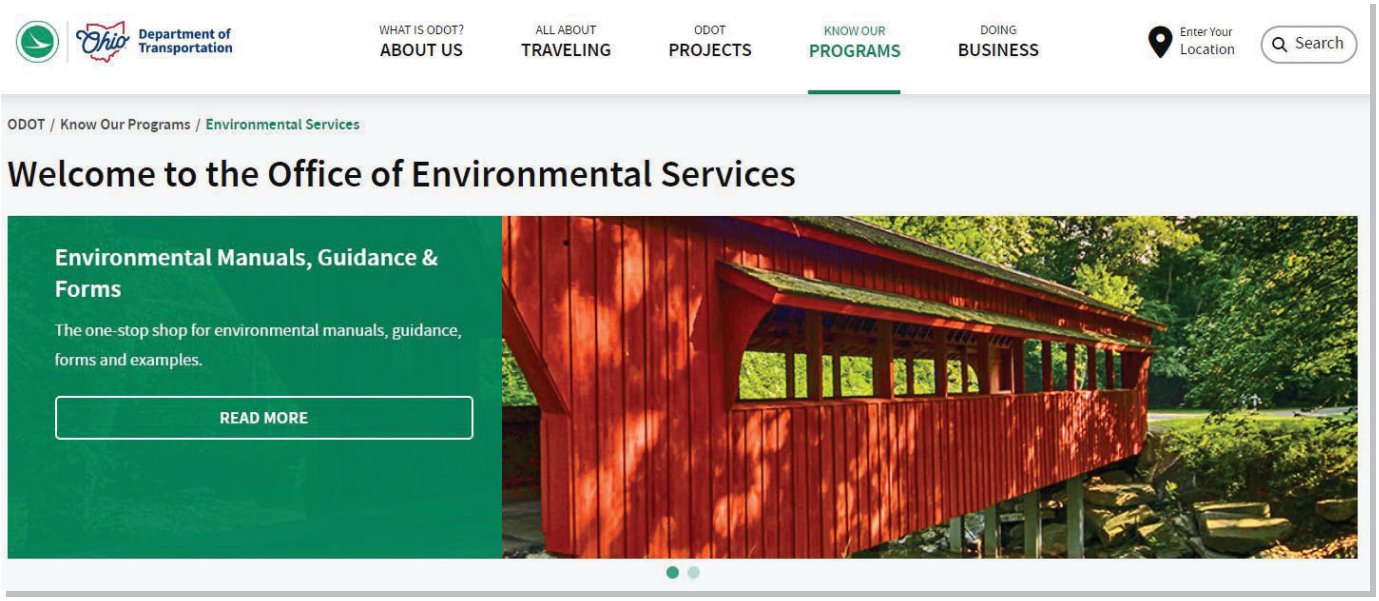


Figure 5-9.6: ODOT's Environmental Program Website[23]

The EP staff also ensures that land liabilities as listed in the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) and the Superfund Amendment and Reauthorization Act (SARA) are considered. If a property is found to be contaminated, the staff works to have those materials removed, properly identified and managed under the Resources Conservations and Recovery Act (RCRA) and the Hazardous and Solid Waste Amendments (HSWA). For sites requiring remediation, the EP staff conducts the necessary coordination with the US Environmental Protection Agency (USEPA), Ohio EPA and/or the Bureau of Underground Storage Tank Regulations (BUSTR) for the project. The EP staff also assists in keeping regulatory compliance of manmade and hazardous waste. The EP staff addresses ODOT's regulatory issues and is the points of contact for federal regulatory agencies.

> **Local notes**: ERPC staff is aware of these requirements.

The EP staff ensures that all projects listed on the STIP and/or TIP contain the correct documentation required to have Mobile Source Air Toxics (MSAT), Particulate Matter (PM2.5) and Ozone (O3) as addressed under NEPA. The EP staff provides guidance that is necessary to ensure that transportation projects are in compliance with the Clean Air Act, Transportation Conformity, and NEPA relative to air quality issues. They also are responsible for coordinating air quality analyses with the FHWA, OEPA, and USEPA, as necessary and to advise local transportation project sponsors of the air quality analysis requirements of their projects. Local project sponsors are then required to conduct the required air quality analyses prior to NEPA approval.

> **Local Notes:** Locally, the ERPC MPO is not within an Ohio EPA non-attainment area and, therefore, is not required to have any air quality testing done. The planning region does share a border with NOACA, which is within an Ohio EPA non-attainment area, so any work done in

[23] http://www.dot.state.oh.us/Divisions/Planning/Environment/NEPA_policy_issues/Pages/default.aspx

overlapping jurisdictions does require an assessment. Typically, NOACA's MPO sends over their conformity analysis for ERPC to consider and approve.

The ERPC staff is responsible for reviewing and providing oversight for projects with impacts to drinking water resources. Drinking water resources refer to ground water and surface water, drinking water source protection areas and sole source aquifers.

> **Local Notes:** The ERPC planning area has one federally-designated Sole Source Aquifer: the Bass Islands Aquifer located in Catawba Township. The designation limits certain land uses such as landfill facilities from being installed within the Sole-Source Aquifer area. The remainder of the region utilizes water from Lake Erie, which is designated as an exceptional warm water habitat, superior high-quality water, public water supply, agricultural water supply, industrial water supply and bathing waters, that exists along its northern border.

Staff works towards ensuring Title VI initiatives are being carried out through the department's public involvement process. The process typically includes those that are potentially affected public in developing transportation projects. The goals are to have transportation projects fit harmoniously within their local communities without sacrificing safety or mobility of others.

> **Local Notes:** ERPC conducts an annually demographics analysis report that examined how local projects impact traditionally underserved groups. ERPC also has a Title VI Plan and sends an environmental questionnaire (in coordination with the work plan) annually to ODOT. The Title VI and Public Involvement Plans were both updated in 2019.

Several laws and rules (including NEPA, Endangered Species Act, Fish and Wildlife Coordination Act, and the Clean Water Act) state that some federally funded projects may undergo studies to determine the degree and effect impacts resulting from projects have on the natural environment. For ODOT, these studies focus on the impacts resulting from transportation projects, whether it is new construction projects or maintenance activities.

Permits may also be required for projects involved in stream work, wetlands or significant amounts of new right-of-way. Ecological surveys are performed to inventory water quality, aquatic ecosystems, endangered species, wetlands and terrestrial ecosystem resources in the vicinity of the proposed project. This information is recorded in an Ecological Survey Report (ESR) and this report is coordinated with staff. Some projects may require separate reports for specific ecological resources such as mussels and endangered species. Special areas that ODOT is directly involved with are areas designated as Section 4 (f) and 6 (f).

> **Local notes:** In Erie, Ottawa and Lorain County, there are several endangered species and wetlands. There are no wild and scenic rivers listed in Erie, Ottawa and Lorain Counties, but are home to environmentally sensitive areas, including Magee Marsh Wildlife Area, the Lakeside Daisy Nature Preserve, and Old Woman Creek State Nature Preserve. Lake Erie does have a coastal management boundary zone and portions are listed in the coastal barrier system which is managed by the Ohio Department of Natural Resources, Office of Coastal Management. Staff will coordinate this office when projects are located within the coastal management boundaries. There are also numerous floodplains within the planning area. ERPC is the floodplain administrator for

the unincorporated areas of Erie County, and the Ottawa County Building Department is the floodplain administrator for the unincorporated portions of Ottawa County.

5.11 Security

Security: Since the 9/11 terrorist attacks, the Federal Highway Administration and many other organizations have been looking closely at homeland security and institutional strategies for providing metropolitan level coordination of transportation system operations. "A comprehensive national approach to incident management, applicable at all jurisdictional levels and across functional disciplines, would further improve the effectiveness of emergency response providers and incident management organizations, across a full spectrum of potential incidents and hazard scenarios".[4] Such an approach would also improve coordination and cooperation between public and private entities in a variety of domestic incident management activities.[5] In order to satisfy this planning regulation, ERPC staff continues to coordinate locally with the Erie County Emergency Management Agency (EMA) and Ottawa County Emergency Management Agency.

The Erie County EMA and Ottawa County EMA are responsible for planning, mitigation, response, and recovery for both natural and man-made disasters in their respective counties. This includes nuclear attack, terrorism, weather phenomena, nuclear power plant accidents, hazardous materials accidents, and any other occurrence deemed a disaster or emergency. With mutual aid agreements, both county EMA's have also responded to situations in surrounding counties when requested.

Figure 5-9.7: Local disasters[24]

[4] Homeland Security Act of 2002, Section 2(6)
[5] Homeland Security – National Incident Management System
[24] https://sanduskyregister.com/news/412060/train-derailment-cleanup-continues/

911 Call Center: Both the Ottawa County and Erie County agencies insures their Emergency Operations Center (EOC) center which is operational 24 hours a day, seven days a week. The center provides emergency communications, radio and telephone, along with other features designed to allow EOC members to help manage any disaster that may befall our country. The County's Emergency Response Vehicle is also outfitted with communications, and other response type equipment, allowing for the capability of a mobile EOC.

Both agencies are tasked with maintaining the 9-1-1 service, although in Ottawa County the City of Port Clinton and Village of Oak Harbor have their own dispatch centers. The first 9-1-1 systems were called Basic 9-1-1 systems. All 9-1-1 calls were directed to one Public Safety Answering Point (PSAP) per telephone office. 9-1-1 dispatchers only received the caller's telephone and had to ask the caller for name, address and county location. Advances in computer systems and telephone company technology combined to create ENHANCED 9-1- systems. Today, 86 of 88 Ohio counties have Enhanced 9-1-1 systems on line, including Erie and Ottawa County. Enhanced systems allow 9-1-1 calls to be routed to the proper Public Safety Answering Point (PSAP) within each county. Also, each 9-1-1 call displays the caller's telephone number, name, and address, as well as the correct police, fire, and emergency medical response agency for each citizen within the county. In March of 2011, Erie County also completed the installation of Phase II Wireless 9-1-1, which will help locate where cellular 9-1-1 callers are calling from utilizing a mapping system.

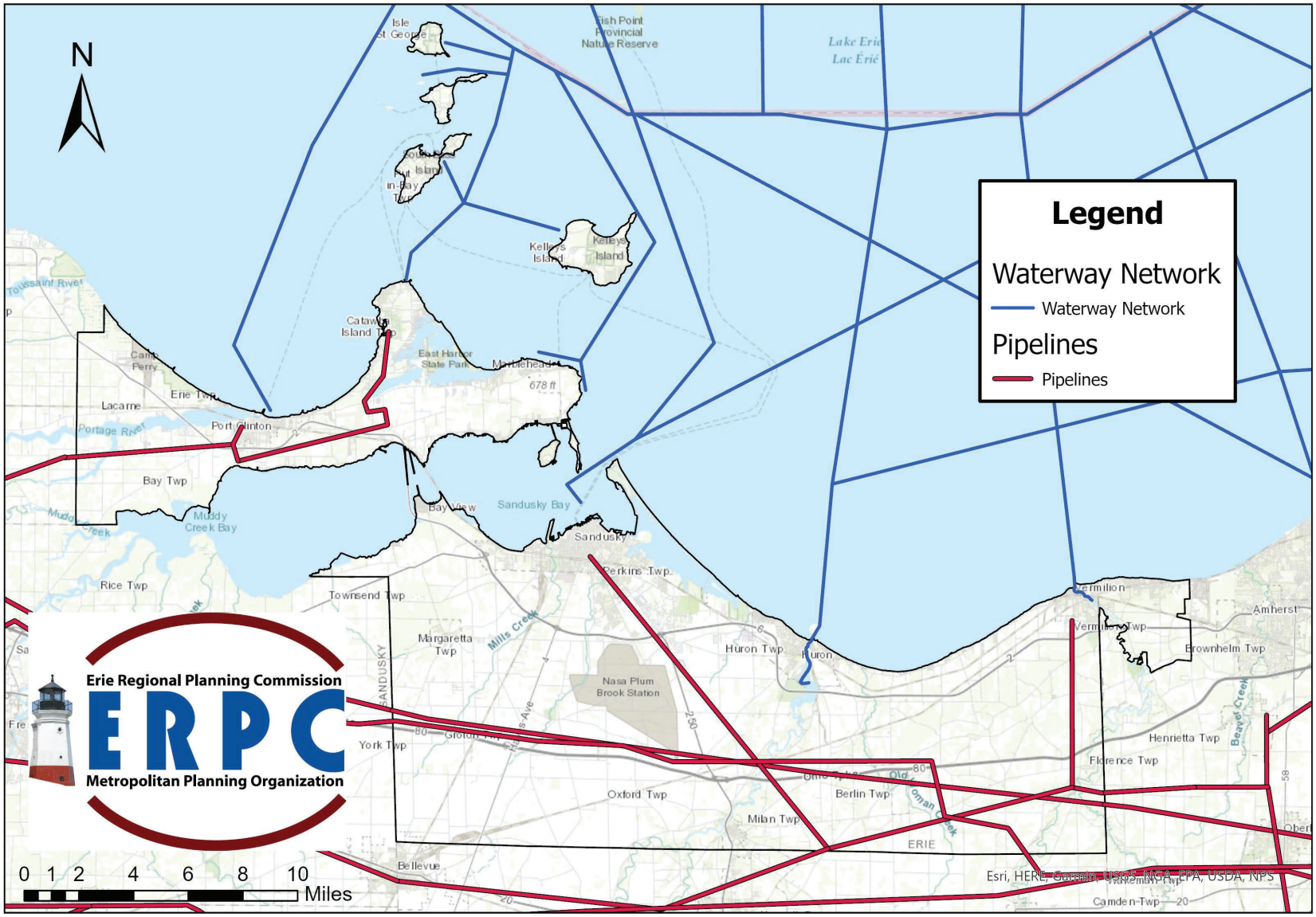
The agencies have responded to calls covering hazardous materials spills, flooding, disposal of household hazardous materials, and mercury recovery/recycling. The Ottawa County EMA responded to less than 6 calls asking for assistance in 2024, while Erie County responded to 30. Erie County updated their Chemical Emergency Response and Preparedness Plan in October of 2024. Erie County does have Emergency Response Plans in place that provides procedures of incident management as developed by the Erie County Local Emergency Planning Committee (LEPC), and Ottawa County also maintains an Emergency Operations Plan as maintained by the Ottawa County LEPC. Ottawa County also regularly shares Emergency Preparedness Information for residents in Ottawa and Lucas County for emergency actions at the Davis-Besse Nuclear Power Station in Ottawa County. From the Chemical Emergency Response and Preparedness Plan, ERPC was able to identify possible areas of vulnerability across the region's transportation network.

Transportation Risks: The main routes for transportation are the Ohio Turnpike, State Routes 4, 6, 13, 53, 113, 250, and 269, all of which are commonly used for transportation to and from the planning area. Also, three rail routes exist in the county. Transportation incidents have the potential for posing the highest risk to both citizens and property within in the planning area. In addition, seasonal variations exist that will affect accidental releases and subsequent hazards. During the recreation months, the populations across lakefront communities, including Catawba and Danbury Township, tend to spike due to regional tourism. This population increase may have a large effect on response operations.

Pipeline Risks: ERPC MPO has (4) pipelines traversing, starting, or stopping within its borders. This includes 1 interstate pipeline in Ottawa County operated by Columbia Gas. Erie County has three pipelines, including the intrastate East Ohio Gas Co., pipeline, and two interstate pipelines, operated by Columbia Gas and the NEXUS Gas transmission line that was installed in 2018. These pipelines carry natural gas on a regular basis.

Navigable Waterway Risks: The planning area has numerous navigable waterways upon which hazardous materials may travel. These waterways are primarily on Lake Erie, although they may impact the Sandusky Bay and Huron River.

Nuclear Risks: The Davis-Besse Nuclear Power Station is in Carroll Township in Ottawa County. Although the station is technically outside of the MPO Planning Area, relevant emergency planning impacts the MPO portion of Ottawa County as part of its 10-mile emergency planning zone. Ottawa County Emergency Management Agency's staff hosts a State Resident Radiological Analyst and power station utility liaison to ensure emergency monitoring and preparedness, and makes potassium iodide (KI) available to residents within the emergency planning zone to help reduce the risk of thyroid disease.



Map prepared by Erie Regional Planning Commission, and is intended for illustrative purposes only. Erie County, Ohio assumes no responsibility or liabilities for any errors or omissions contained here in.

Figure 5-9.8: Pipelines and Navigable Waterways

ERPC MPO 2050 Long Range Transportation Plan

Geographic Specific Risks

Specific areas in the region considered vulnerable per the LEPC Hazard Analysis Committee:

City of Sandusky: The City of Sandusky is the County Seat of Erie County and was incorporated in 1824 and is in northwest portion of the County bordering Lake Erie. The city is comprised of 10.0 square miles of land area. As of the Census of 2020, there are 25,095 people, 11,191 households and 6,626 families residing in the city. The population density is 2,509.5 people per square mile. There are 13,351 housing units at an average density of 1,335.1 units per square mile. The City of Sandusky is the largest municipality in Erie County. The city is unique in that it has a summer time population that more than doubles due to the influx of tourists. Main State Routes include 250, 6, 4, and 101. All of these routes are used to transport hazardous materials. The Norfolk & Southern Railroad operates north and south, as well east and west through the city. It has also had derailments within the city, including a derailment and spill in 2022 that closed the Columbus Avenue underpass, a major access point for the city. The east/west line especially hauls hazardous materials. The city also has numerous marinas and has forty-one (41) facilities reporting hazardous materials to the LEPC.

City of Vermilion: The City of Vermilion is located in both Lorain County and Erie County. It is located on the western border of Lorain County and the eastern border of Erie County. The City has a total land area of 10.8 square miles. According to the Census of 2020, the population of the City is 10,659. There are 4,473 households and 2,845 families residing in the city. The population density is 986 people per square mile. There are 5,134 housing units at an average density of 475.4 units per square mile. The City of Vermilion is the second largest municipality in Erie County. The Vermilion River runs through the city, empties into Lake Erie, and is used primarily for recreational boating. Marinas on the river hold over 7,000 boats each summer. There have been numerous fuel spills on the river. State Routes 6, 2, and 60 enter, or run close to the city, and the Norfolk and Southern Railroad runs through downtown Vermilion. All these routes are used to haul hazardous materials. Vermilion has thirteen (13) facilities reporting hazardous materials to the LEPC. The City of Vermilion participates in Lorain County's Hazard Mitigation Plan.

City of Huron: The City of Huron is also located in the north center portion of the county, on the south shore of Lake Erie. The population of the city is 6,922 and can double in the summer due to tourists. The city has a total land area of 7.7 square miles. According to the 2020 Census, there are 3,112 households and 1,796 families residing in the City. The population density is 899.0 people per square mile. There are 3,847 housing units at an average density of 499.6 units per square mile. State Routes 6, 13, and 2 run in or near the city, and the Norfolk and Southern Railroad runs through the city. The Huron River also runs through the city, emptying into Lake Erie, and has numerous marinas. Although the Huron River is used primarily for recreational boating, there have been fuel spills on the river, as well as on the state routes and railroad. Huron has fourteen (14) facilities reporting hazardous materials to the LEPC.

City of Port Clinton: The City of Port Clinton is located in the eastern portion of the county at the start of the county peninsula, and is the county seat of Ottawa County. The population of the city is 6,025 and can double in the summer due to tourists. The city has a total land area of 2.1 square miles. According to the 2020 Census, there are 2,942 households and 1,493 families residing in the City. The population density is 2,827 people per square mile. There are 3,670 housing units at an average density of 1,747 units per square mile. State Routes 2 and 53 bypass the city to the south, State Route 163 runs through the city, along with the Norfolk and Southern Railroad line. The Portage River also runs through the city,

emptying into Lake Erie, and has numerous marinas primarily utilized by recreational boaters. The presence of recreational boating does lead to fuel spills on the river, as well as on the state routes and railroad. Huron has fourteen (14) facilities reporting hazardous materials to the LEPC.

Village of Berlin Heights: The Village of Berlin Heights is 18 miles southeast of Sandusky and comprises a total land area of 1.6 square miles. As of the Census of 2020, there are 651 people, 247 households and 181 families residing in the village. The population density is 406.9 people per square mile. There are 290 housing units at an average density of 181.3 units per square mile. The village has the Ohio Turnpike, as well as State routes 61 and 113 running through the village; all of which are used to haul hazardous materials. The village also has two nature preserves in close proximity, with creeks draining into them.

Village of Kelleys Island: Kelleys Island, which is the largest freshwater American island, is located in Lake Erie, 11 miles northwest of Sandusky, and has a land area comprising 4.6 square miles. As of the Census of 2020, there are 256 people, 117 households and 74 families residing in the village. The population density is 55.6 people per square mile. There are 913 housing units at an average density of 198.5 units per square mile. During the summer months the population increases significantly. The island has one facility reporting hazardous materials to the LEPC. There are also numerous marinas and transient dockages available, all of which could produce hazardous materials spill. Of particular concern is the fact that during the winter, the only way on and off the island is by aircraft.

Village of Put-In-Bay: The village is located on South Bass Island in Lake Erie, 15 miles northwest of Sandusky, and has a land area comprising 0.6 square miles. As of the Census of 2020, there are 154 people, 32 households and 14 families residing in the village. The population density is 256.7 people per square mile. There are 327 housing units at an average density of 545 units per square mile. Similar to Kelley's Island to the west, the population increases significantly during summer months. Marinas and transient dockages can produce hazardous materials spill, and during harsh winters, the island is only accessible by aircraft.

Village of Marblehead: The village of Marblehead is located at the eastern end of the Danbury peninsula in Ottawa County, and is 5.0 miles north of Sandusky. The village comprises 3.2 square miles of total land area. As of the Census of 2020, there are 865 people, 421 households and 298 families residing in the village. The population density is 270.3 people per square mile. There are 1129 housing units at an average density of 352.8 units per square mile. The village is home to the Lakeside Daisy State Nature Preserve, protecting the federally threatened plant species for which it was named after. The village is surrounded by water along its peninsula, and bordered to the west by the LaFarge Quarry.

Village of Bay View: The Village of Bay View is in northern part of Margaretta Township, 8 miles west of Sandusky, and comprises 0.3 square miles of land area. As of the Census of 2020, there are 608 people, 299 households and 155 families residing in the village. The population density is 2,026 people per square mile. There are 351 housing units at an average density of 1,170 units per square mile. State Route 269 dead ends in the village, and the Norfolk and Southern Railroad runs east and west through the village. There have been train derailments in the past near the village due to a bridge over Sandusky Bay and high winds associated in that area. There is one marina in the village with numerous private docks. The village has no facilities reporting to the LEPC.

Village of Castalia: The Village of Castalia is in central Margaretta Township, 7.5 miles southwest of Sandusky, and comprised of 1.0 square mile of total land area. As of the Census of 2020, there are 774 people, 373 households, and 250 families residing in the village. The population density is 774 people per square mile. There are 362 housing units at an average density of 362 units per square mile. State Routes 101 and 269 meet in the village. Castalia has one reporting facility within the village. Of particular concern in this area is a State Wildlife Area, and a state managed trout farm within a mile of the village. Cold Creek, runs through the village, empties into Sandusky Bay.

Village of Milan: The Village of Milan is located in the south-central part of the county and straddles both Erie and Huron County. It has a land area of 1.2 square miles. Milan is 13 miles south of Sandusky. According to the Census of 2020, there are 1,371 people, 590 households and 463 families residing in the village. The population density is 1,141.7 people per square mile. There are 556 housing units at an average density of 463.3 units per square mile. The village has five facilities reporting hazardous materials to the LEPC. Two of these facilities are near a creek that runs into the Huron River. State routes 250, 113, 601 and 13 runs through or near the village and are known to carry hazardous materials. The Huron River also runs through Milan but is too shallow for any kind of boat traffic.

High Traffic Areas: Transportation routes within Erie County that are considered vulnerable to a hazardous material accident include the Ohio Turnpike, State Routes 2, 4, 6, 13, 53, 60, 61, 113, 250 and 269, and the east/west line of the Norfolk and Southern Railroad. These routes transect areas of differing populations, which present a risk for transportation related hazardous materials incidents. US 250 in Perkins Township can see congestion during peak hours during the summer months due to an influx of tourists visiting Cedar Point. Additionally, weekend to traffic to the shores and islands region can experience bottlenecks at interchanges in Ottawa County along SR 53 and Catawba and Danbury Township.

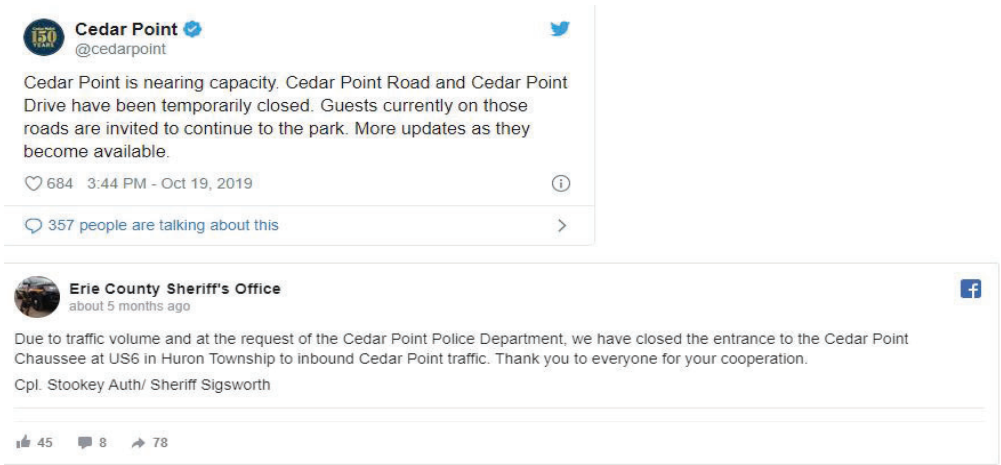


Figure 5-9.9: Social media postings from Cedar Point in 2019

In conclusion, the plan provides for a coordinated response between state/federal agencies and local response forces. ERPC MPO staff has worked with the Erie County EMA to aid in security initiatives through completing various mapping activities and served on the steering committee for the recent update to the Erie County Hazard Mitigation Plan. MPO staff will look to assist coordinated responses in Ottawa and Lorain County as requested as well.

Land Use and Travel Demand Model Forecasts

6.1 Land Use Forecasting

The forecasting of land use consists of two parts: A regional economic and demographic forecast, and then allocation of the county totals into small zones for the purpose of forecasting future traffic volumes and travel times. For the purpose of this plan, the model evaluated all of Ottawa and Erie County. Within the planning area there is a small portion of Lorain County (in and near the city of Vermilion) that is included. This last area has forecasts developed that are not based on countywide totals but estimated to "mirror" adjacent portions of Erie County.

Traffic forecasts are used for guidance in designing transportation systems. Typically, a 20-year forecast is required beyond the date that the project is anticipated to be completed and opened to traffic to cover a "design period." Therefore, transportation planning horizons that include traffic forecasting should ideally extend at least 30 years, to provide forecasts for projects that may have design work currently in progress, but for which the final year of construction may still be five to ten years into the future. The base year for traffic forecasting for this plan was set to the year 2020 due to the most recent data availability. As a result of this plus demographic forecast availability, the plan horizon year was established as 2050.

****Since there was very little growth between the year 2015 and 2020 in both Erie County and Ottawa County, levels of growth forecast for years 2020-2050 from the sources discussed below are applied as levels of growth from 2020-2050 for this transportation plan.****

The Ohio Department of Development (ODOD) has an ongoing program to develop population forecasts statewide broken down by county for 30 years beyond the date of the most recent decennial Census (which in this case was 2020). Details of this program which provides forecasts of population for Ottawa and Erie County at five-year intervals out to Year 2050 by five-year age and gender cohorts can be found online[1]. This detail is valuable for addition forecasting of such things as school kids and local workforce (via age and gender-specific workforce participation rates from the US Bureau of Labor Statistics). The population totals, historical trend lines, and persons and vehicles per household allows for the forecast of dwelling units and private vehicle ownership. In turn this information can be used to determine future rates of travel.

As shown in the ODOD data, the forecasted 30-year decline in population for Erie County is about 20% (from 75,622 in the 2020 Census to 60,049 for the Year 2050), driven in large part by the aging of the "baby boom" generation. Ottawa County has a forecasted 30-year decline of 22% (from 40,364 in 2020 to 31,371 in Year 2050). In the absence of any previously developed and adopted employment forecasts for the county locally, a variety of other forecasts are available. Forecasts available from public-sector employment agencies, however, are typically short-term (eight to ten years) and not sufficient for the needs of transportation planning.

A nationally based interregional economic model called Impact Analysis for Planning (IMPLAN), has been used for the Ohio statewide traffic forecasting model and was utilized here. While the IMPLAN forecasts are statewide and not county-specific, forecasted growth rates by 20 general industrial categories

[1] https://development.ohio.gov/reports/reports_pop_proj_map.htm

can be applied to current county-wide employment levels by industry to develop forecasts of employment by industry for the future. These 20 industrial categories were then collapsed down into four categories (retail, two service groups, and industry/warehouse/other) for local traffic analysis.

Due to “inter-county” commuting patterns where workers cross county lines to travel to work, there can be and are gaps between the number of jobs in a county and the workforce living within the county, both now and in the future. However, to ensure that this gap is not forecast to grow excessively large in the future, a check of inter-county commuting gaps for other small metro areas in northern Ohio was reviewed to provide a reasonability check of the initially generated forecasts of employment versus workforce as a function of local population.

To allocate county-level population and employment growth (or decline) figures by zone, first priority goes to known land development plans. Land development changes since the last plan update include the following:

- Aligned Data Center at State Route 4 and Perkins Avenue in Perkins Township
- Redwood Apartments Development along Perkins Avenue in Perkins Township
- Villas of Sandy Creek apartment complex in Perkins Township
- Mucci Farms Expansion on Rye Beach Road in Huron
- Sandusky Intermediate and Primary School Campus
- Lake Erie Arms sports complex on US 250 in Milan Township
- Waterview at Bay Point Development in Marblehead along E. Bayshore Road

Translating these figures to employment by category by zone (as well as population, school kids, vehicles, workers as well as housing units) takes available information from development plans and combines with current data, with adjustments as necessary to ensure that overall county-level forecasts are met.

6.2 Travel Demand Model (TDM)

The traffic forecasting process consists of taking land use data in the form of population and employment figures by zone, breaking it down into different categories, estimating vehicle trip generation rates for each category by different vehicle types (cars versus trucks) and purpose of travel (such as work-related vs. non-work), and then “assigning” the traffic to and from all origins and destinations onto a digital roadway network, which was developed from the Location Based Response System (LBRS) road centerline file that local agencies have developed in collaboration with the state of Ohio (with data added to it from other local state and federal sources, including Roadway Inventory files from the Ohio Department of Transportation (ODOT)). The traffic forecasting process for any given year, summer or off-season, is then conducted as shown in the flowchart (see **Figure 6-2.1**).

Several items in **Figure 6-2.1** (the traffic model flow chart) require some elaboration: OD means origin/destination, or zone-to-zone trip tables, MSA means Method of Successive Averages (where the results of the latest iteration of a traffic assignment to the road network are averaged with past iterations in a way that provides equal weight to each iteration) and the "dynamic loop" refers to traffic being broken into and assigned in one hour intervals to the road network (to better estimate times of day as well as locations of forecasted traffic volumes and congestion). Finally, "path building" refers to estimating the shortest-time travel path thru the road network for every zone-to-zone travel combination, which after the

first time through the flow chart process than incorporates the congestion effects and intersection delays that were estimated after the previous iteration of traffic assignment.

The boxes on the lower left summarize how trip tables for truck traffic are developed and difficult-to-locate employment (such as construction, utilities, and temp services) can get re-allocated to different zone locations, using an "OD table re-estimation" method that is done before the main model process is finalized. This method uses the traffic count figures to track and adjust the zone-to-zone traffic movements thru each of these count stations. The resulting trip table for trucks along with other travel thru the area made in cars on such major routes as the Ohio Turnpike (I-80/90) and State Route 2 represents the "supplemental OD tables" in the chart on the left, which is retained for later modeling steps while the two boxes on the bottom row of the chart are then discontinued and traffic assignment - after looping “dynamically” thru each hour of the day - then goes to the “equilibrium loop” several times. Such multiple iterations are needed due to the feedback needed between selection of an individual’s travel path to a destination and the modeled travel time - which depends in part on the choices that other travelers are making.

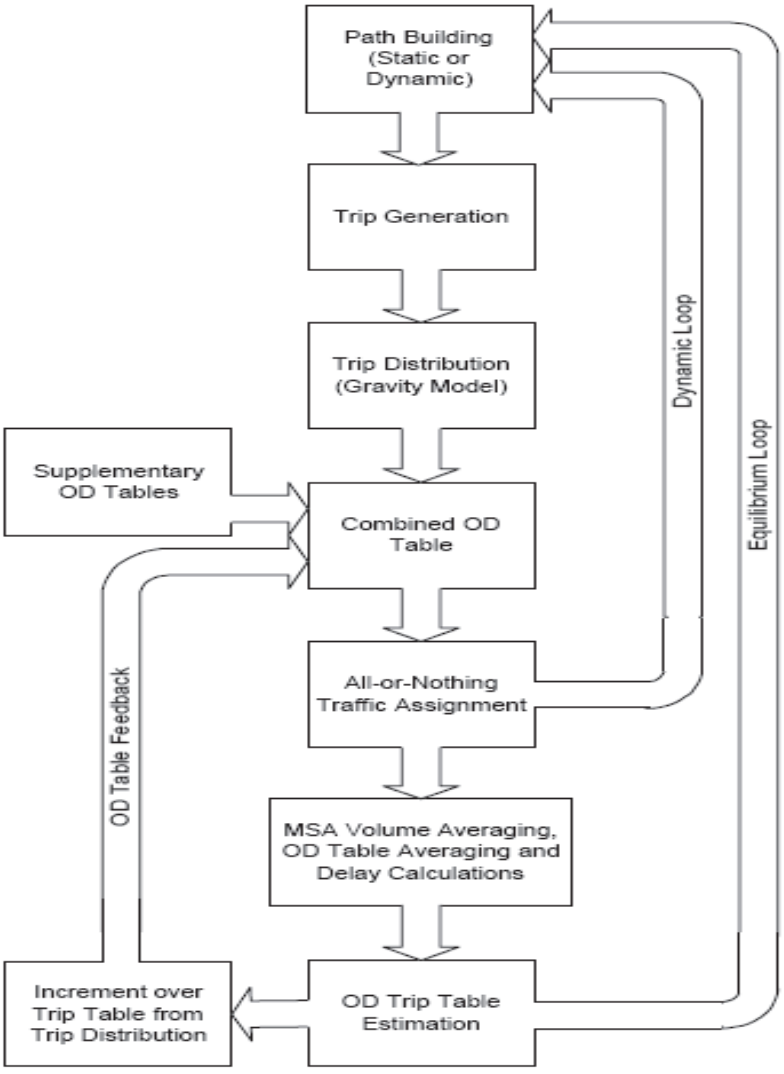


Figure 6-2.1: Traffic model flow chart

The rationale for this type of process, rather than the more traditional use of historical trendlines in traffic along a particular road, is that the latter cannot be used for new or extended segments of roads, and often not adequate in areas where buildup of congestion begins to tempt motorists to change their travel path to save time. The output of the forecasting process is a database that can be used to derive congested roadways, total vehicle miles traveled (VMT), and vehicle hours traveled (VHT).

6.3 Calibrated Model Base Year

For a base year (2015), extensive testing of the modeling process is done to ensure that it produces traffic flows reasonably in accord with traffic counts conducted by both local agencies and ODOT. As shown in **Figures 6-3.1 and 6-3.2**, the overall pattern is found to be quite close to such counts (given the expected level of sampling error inherent in such counts) for both summer and off-season conditions.

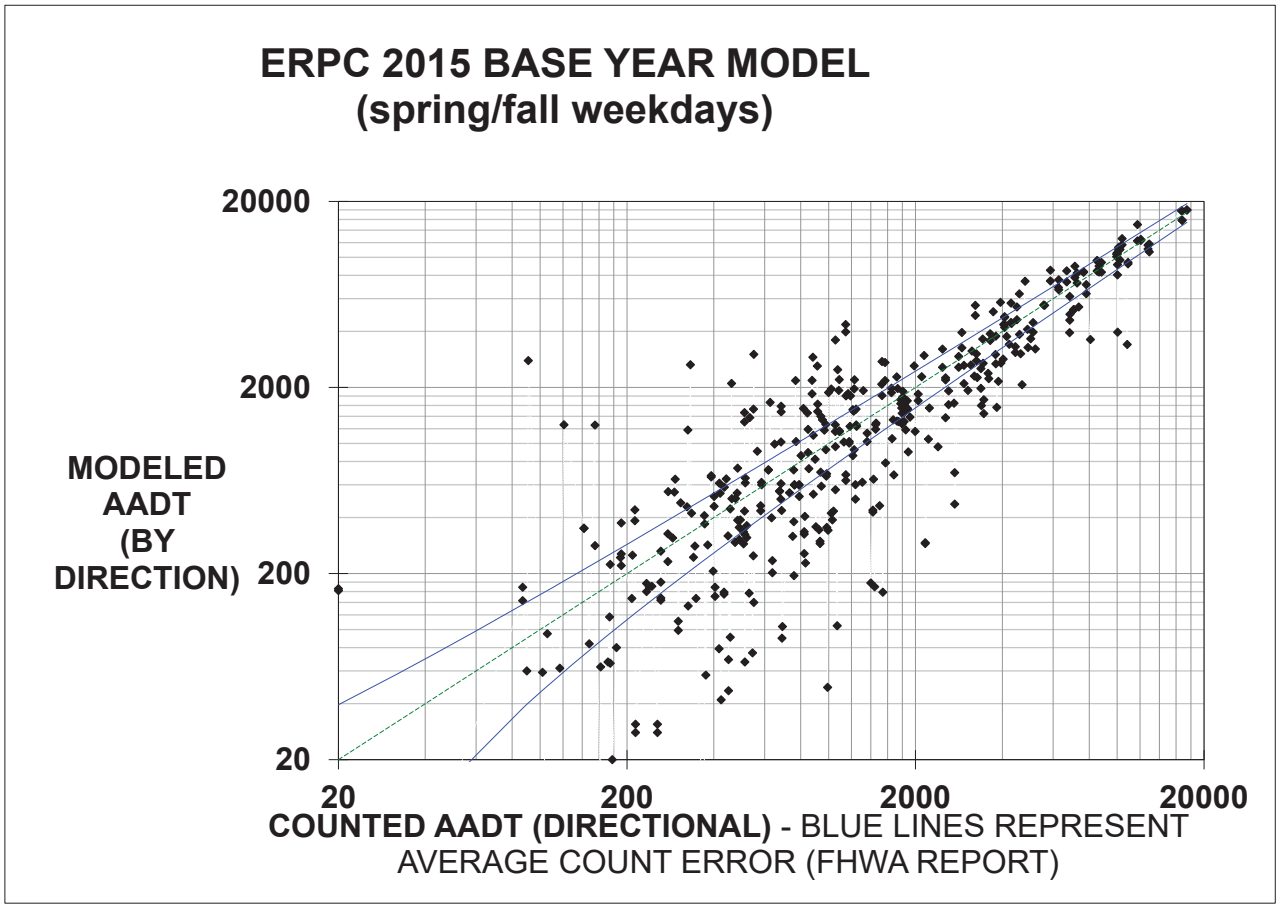


Figure 6-3.1: ERPC 2015 Base Year Model, Spring/Fall

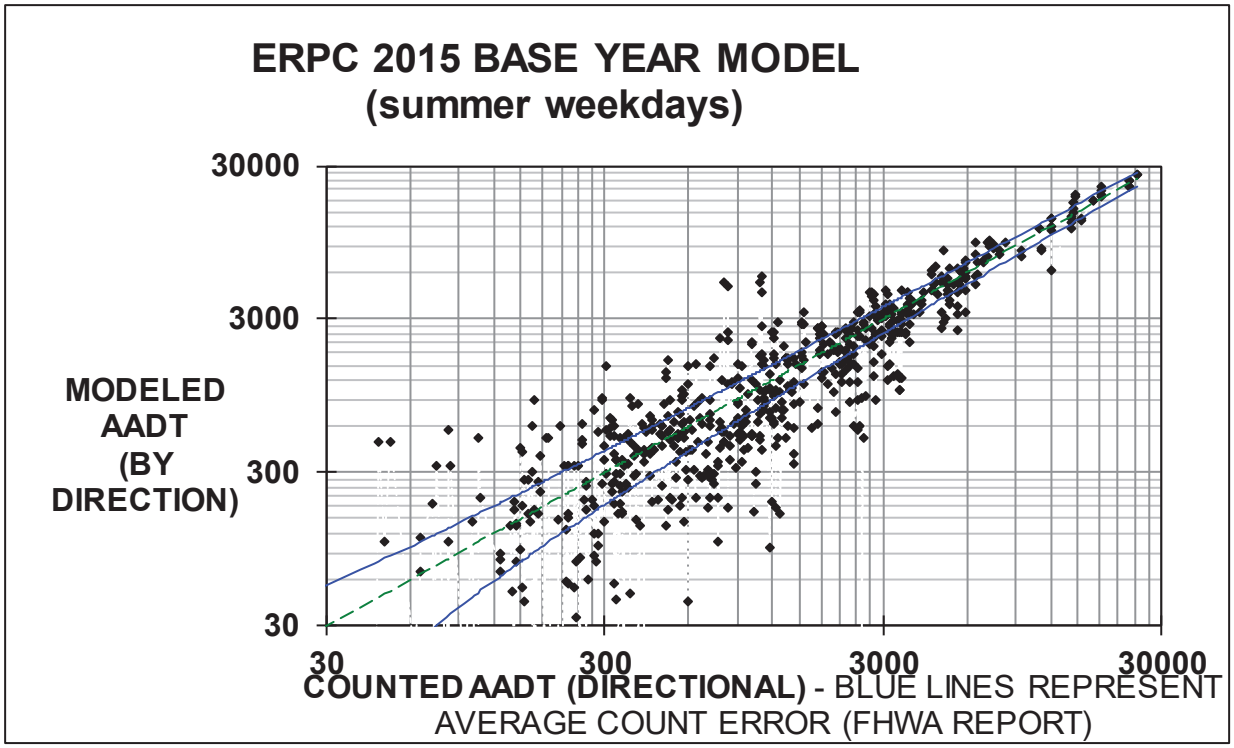


Figure 6-3.2: ERPC 2015 Base Year Model, Summer

(The dashed line indicates where modeled daily traffic volume (by direction) is exactly equal to counted traffic; with the blue lines indicating expected sampling error for a one-day count.)

There are about 454 traffic analysis zones (TAZ) within the MPO region, including all of the City of Vermilion in Lorain County and the eastern portion of Ottawa County, which represent the origin and destination for trips assigned to the network and have boundaries that reflect access to that network. The network contains all the "collector-and-above" major streets and some local streets that make up the MPO's transportation system.

The separate model for the summer season reflects the local importance of tourist-based travel. Tourism forecast assumptions and parking needs for individual sites may be used as input in the future.

6.4 Existing Plus Committed Work

Existing and committed projects were identified through the MPO's Transportation Improvement Program list. The person trips generated through the trip generation module were run through similar trip distribution and assignment modules as the 2020 base condition. The resulting assignments from the equilibrium assignment were adjusted based on assignment-to-count deviation observed in the 2020 base year to be used as a measure against future improvements.

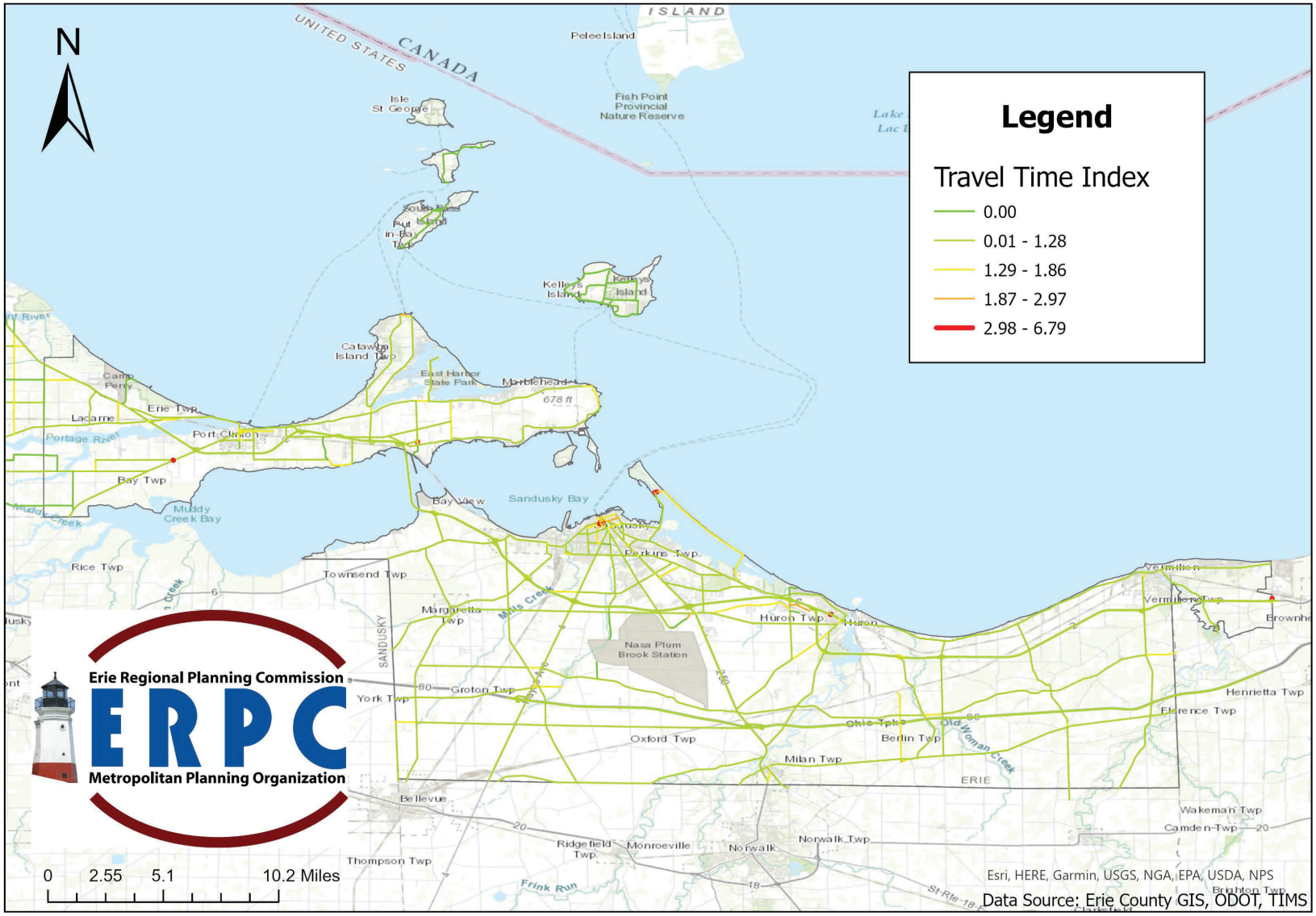


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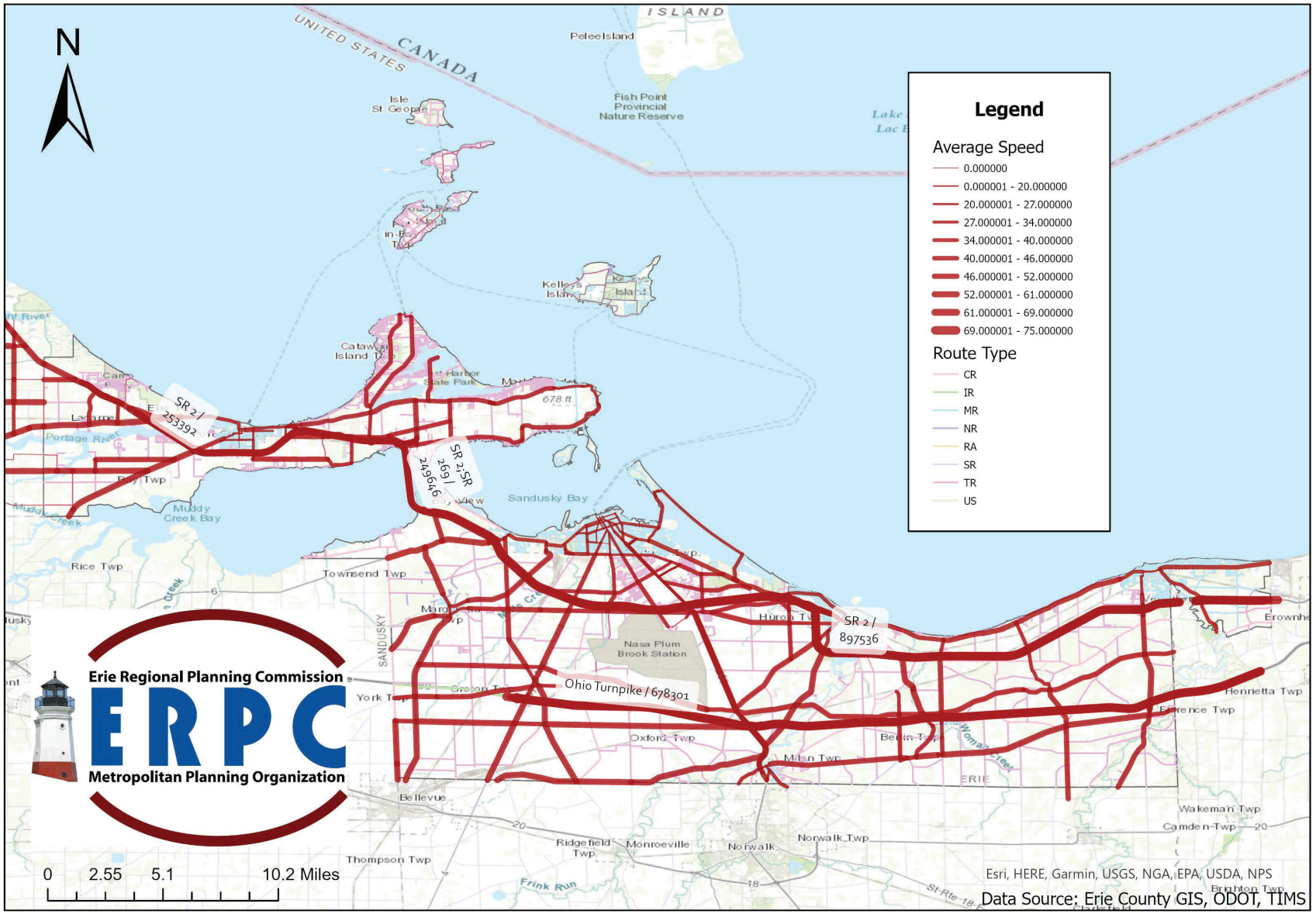
Figure 6-4.1 Travel Time Index

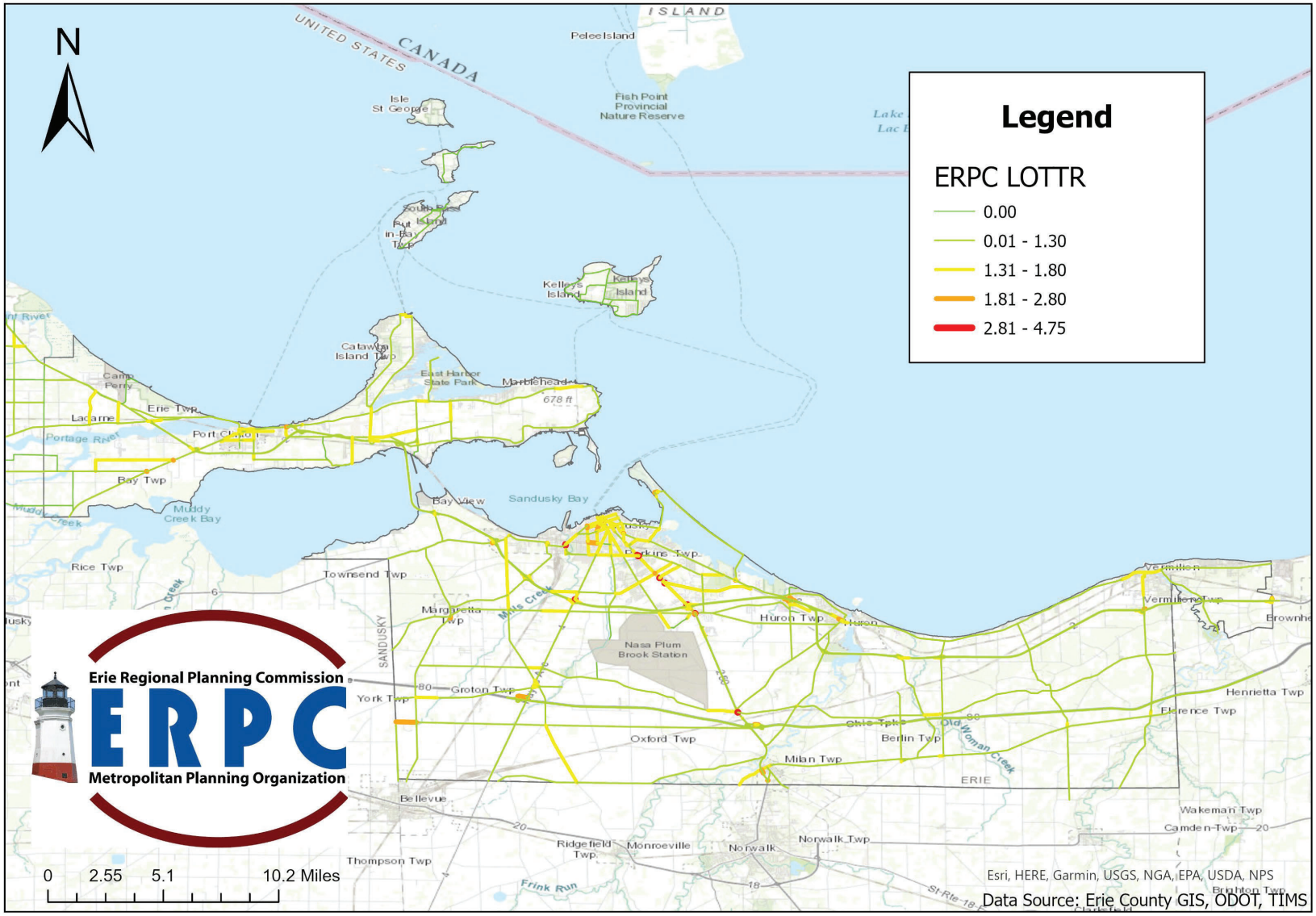
ERPC MPO 2050 Long Range Transportation Plan



Map prepared by Erie Regional Planning Commission, and is intended for illustrative purposes only. Erie County, Ohio assumes no responsibility or liabilities for any errors or omissions contained here in.

Figure 6-4.2 Summer Weekday Average Travel Speeds

ERPC MPO 2050 Long Range Transportation Plan



Map prepared by Erie Regional Planning Commission, and is intended for illustrative purposes only. Erie County, Ohio assumes no responsibility or liabilities for any errors or omissions contained here in.

Figure 6-4.3 Level of Travel Time Reliability

ERPC MPO 2050 Long Range Transportation Plan

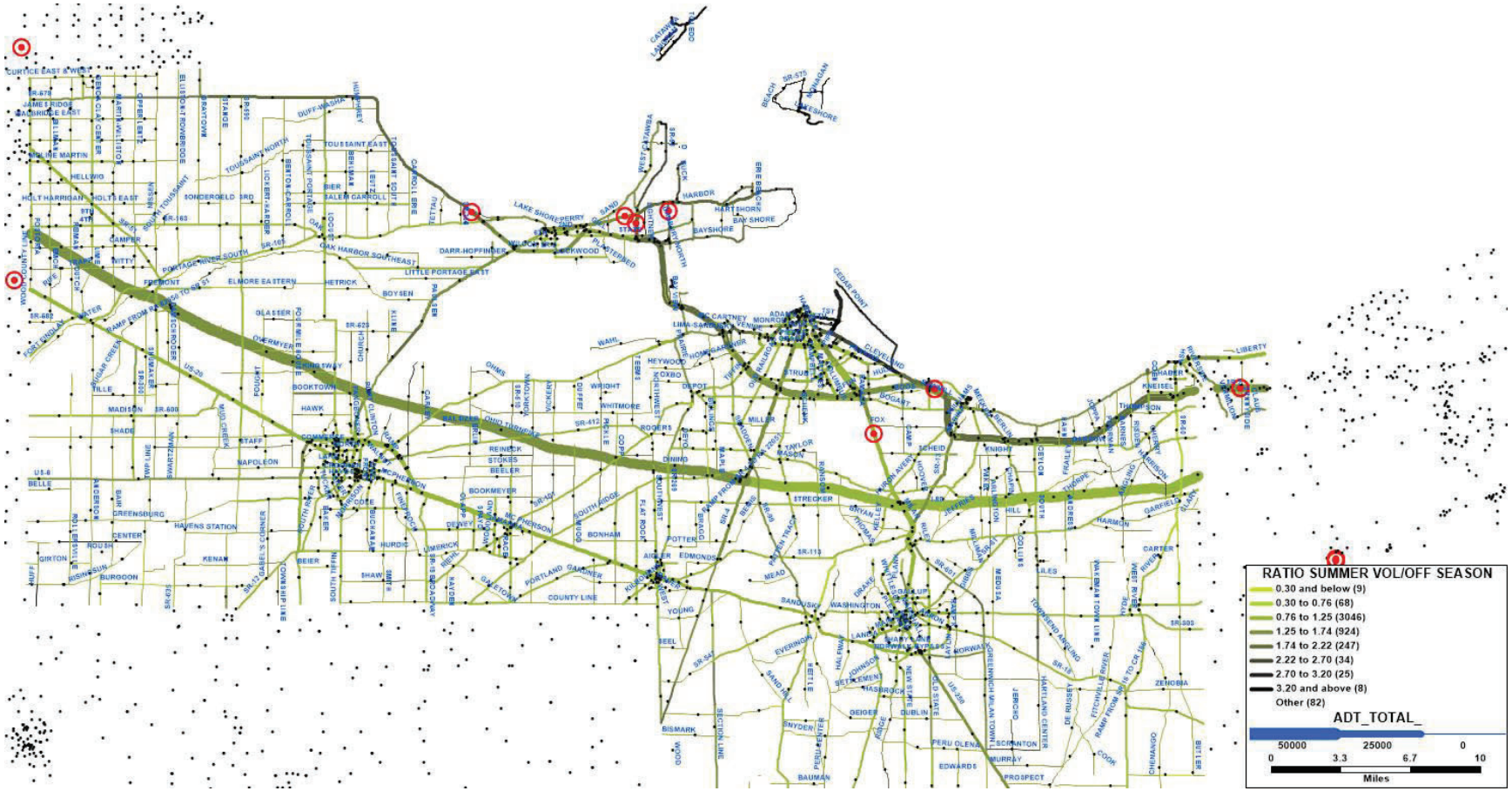


Figure 6-4.4: Ratio of Summer and Off-Season Volumes

6.5 Existing Plus, Committed Plus Planned

The planned and future projects represent studies and improvements that should be undertaken to help satisfy the long-term arterial street system needs across the MPO region. Many of these projects are new projects related to the forecasted growth of the region, its growing impacts of tourism travel, and to the region's related transportation needs. Planned/ future projects are intended to span a period of approximately 30 years and are based upon current deficiencies and the best estimates of anticipated needs, past trends, projections, input and comments received over the last several years from elected officials, business representatives and individuals.

Base year model data (2020) has been reviewed against existing Streetlight Data, a data resource for transportation analysis and planning. Future modeling for the plan horizon year (2050) is still a work in progress based on the new planning area, ODOD projections, and the current pipeline of land use changes. Future updates to the travel demand model will be updated here and Appendix B when available, and modeling form the 2045 Long Range Transportation Plan has been included in Appendix B to serve as a reference for the planning area.

All of the above modeling information was compiled by ERPC staff and Sam Granato, Ohio DOT, Office of Statewide Planning and Research

Chapter 7. Future Transportation System

7.1 Overview

This chapter summarizes the analysis of the year 2050 conditions and identifies future year issues within the MPO.

7.2 Changes in Vehicle Travel (2020-2050)

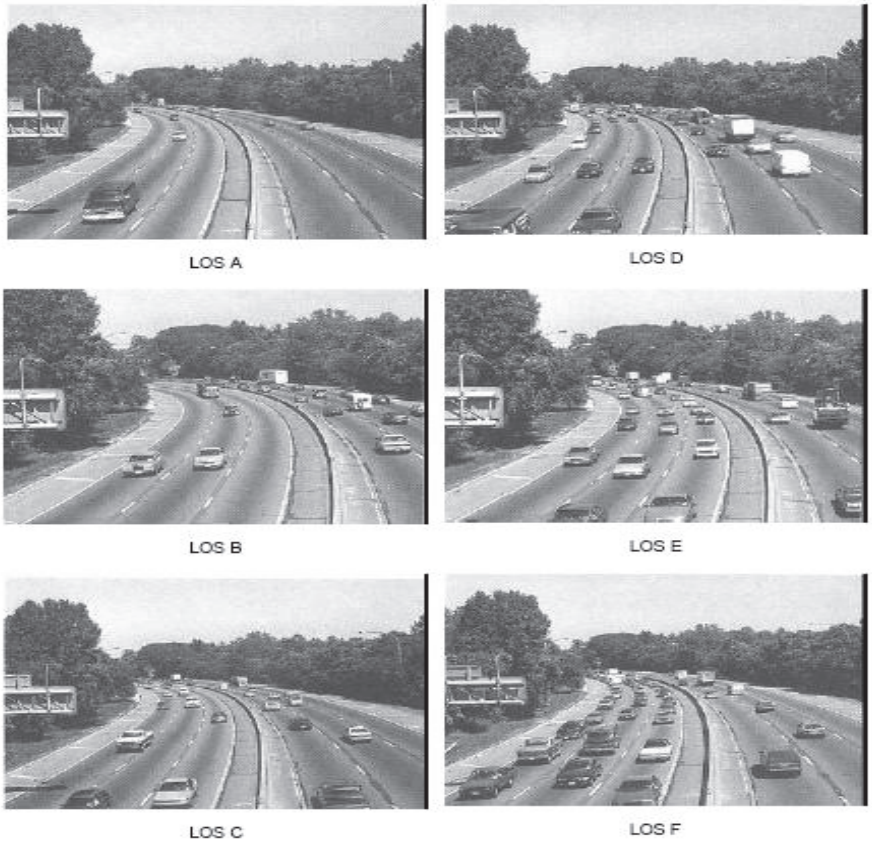
The traffic flow relationships developed in the travel demand model using base year (2020) data are applied with forecasted future land uses and additional roadway projects identified in this Plan to estimate future levels of traffic volume and congestion for identifying locations of concern for the planning process. The process incorporates vehicle saturation flow rates for roadways and their "free-flow" operating speeds (as a function of roadway classification, lanes, width, and posted speed limits), intersection delays based on traffic control using the methods of the national Highway Capacity Manual (HCM), roadway curvature that reduces travel speed, and at-grade rail crossings, so that projects that have an impact on any of these features can be gauged for their impact on traffic flows and delays.

Congestion can be measured in two quantitatively different ways. The first, as briefly described in Chapter Five, is in terms of the absolute amount of delay, speed or vehicle density, which are then assigned Level of Service (LOS) grades (A thru F) as outlined in the HCM and illustrated on the next page. (Roadway design guides typically suggest a target LOS threshold depending on the type of roadway and surrounding area.) The second way of measuring congestion is in relative terms- how much is it forecast to increase or decrease from what it is at the present time? The series of figures located in the "LOS and Traffic Volume Maps" appendix, indicate forecasted levels of traffic volumes and congestion by location, based on the growth in population and employment discussed in the previous chapter and the impact of the projects proposed in this Plan.

Roadway capacity is the maximum number of vehicles that can pass a given point during a specified period under prevailing roadway, traffic and control conditions. The congestion can be defined as the delay experienced due to slow moving or stopped vehicles on the roadway. The congestion can be quantitatively estimated using the Level of Service (LOS) concept. Level of Service takes into consideration speed, density, travel time, and the ratio of traffic volume to roadway capacity. There are six levels of service ranging from A to F. LOS on a freeway is shown in the Figure on the next page. Each level is associated with a specific traffic flow condition. LOS A represents free flow conditions with low volumes and high speeds. LOS F on the other hand characterizes stop and go conditions with high volumes, low speeds and very little maneuverability. LOS C is generally accepted because at this level acceptable operating speeds can be achieved, and reasonable freedom of maneuverability exists. LOS E often characterizes conditions at capacity and extended delays are inevitable. LOS D, E, and F are associated with congested conditions. Congestion can be categorized as recurring or non-recurring. Recurring congestion will occur on the facilities that handle near capacity or over capacity traffic volumes repeatedly. Non-recurring congestion can be unpredictable and can occur due to an obstruction to the normal traffic flow. A traffic accident, a disabled vehicle or roadway maintenance can cause non-recurring congestion. Potential future recurring congestion spots can be identified by analysis using typical or "design hour" traffic conditions. Traffic control devices (e.g. signals) can contribute to

congestion. The dividing line between LOS C and D has been set in the HCM as 35 seconds at signalized intersections, 25 seconds for unsignalized (stop control) intersections, 50% of free-flow speed for urban arterial streets, and roughly 70% of carrying capacity for freeways and rural multi-lane highways.

ILLUSTRATIVE LEVEL OF SERVICE (LOS) BASED ON FREEWAYS



Source: Transportation Research Board. Highway Capacity Manual, 2000 edition.

Figure 7-2.1: Level of Service

Most travel time represents a cost. The cost of travel is higher when travel is congested or unreliable. Changes in Vehicle Miles and Hours Traveled are frequently used as a measure of benefit or time cost savings due to a transportation improvement. Primary results from the alternative analysis are net changes in vehicle-miles of travel and vehicle-hours of travel. **Table 7-2.1** summarizes the vehicle miles traveled as related to the LRTP recommended roadway improvements for the year 2050. Car and truck trip growth grates for the year 2050 were derived from the model trip matrices based on growth between the base year and 2050 population and employment.

Table 7-2.1: Daily Vehicle Miles Traveled (Pending Modeling)

Roadway Classification	No Build 2050	Improve 2050
Freeway	3,950,774	3,905,326
Arterial	1,066,436	1,072,675
Collector	651,340	686,620
Local	375,986	377,005

7.3 Forecasted 2050 Average Daily Traffic on the Existing Plus Committed Network

The TDM is used to forecast traffic volumes on roads within the MPO region. Year 2050 congestion levels were determined using the year 2050 projected traffic volumes with no roadway improvements assumed. Estimates of future delays were compared to standards from roadway design guides and the Highway Capacity Manual to identify potential areas of congestion. The projected Average Daily Traffic and Level of Service Maps are in the appendix and display the results of the analysis for future conditions within the MPO if no improvements are made to the existing roadway system. Also, note that the level of service maps generated from the travel demand model may not totally reflect site specific field conditions, as such, forecasts of future congestion patterns should typically be followed up with site-specific studies before specific improvements are proposed by the MPO's member jurisdictions.

7.4 Transit

The Sandusky Transit System (STS) is the most developed transit system in the MPO region and serves the urbanized area of Erie County. Over the years the Sandusky Transit System has grown. There are now five routes that cover the City of Sandusky and portions of Perkins and Huron Townships. In the Sandusky Strategic Vision Plan, several short-to mid-term strategies are identified for transit. These include:

- Regionalizing Public Transportation
- Develop a regional taskforce to explore the feasibility of a regional transit system that improves service and financial sustainability
- Explore Seasonal Transit Opportunities
- Hub Creation and Fixed Bus Routes out of Downtown Sandusky (implemented)

Future growth in the city and the increase in destination points in the Downtown and Bayfront areas will support the expansion of these services.

Ottawa County is serviced by Ottawa County Transit Agency (OCTA) and provides dial-a-ride services. Conversation on the peninsula of the county has centered on seasonal transit opportunities, connecting downtown Port Clinton to businesses along SR 53 in Catawba Township and Village of Marblehead.

Additionally, recommendations from the 2022 Erie County Coordinated Public Transit-Human Services Transportation should continue to be implemented.

7.5 Bicycle/Pedestrian Facilities

In future years, the ERPC MPO and its political subdivisions will continue to face the challenge of providing a comprehensive and thorough bicycling and pedestrian network as an alternative means of transportation. Although the region has made progress in this endeavor, a deficiency of the current trail system is there are segments that have not been linked into the existing system and do not provide continuity. This compromises the effectiveness of the system. Plans were developed by both Erie and

Ottawa County on how to implement a regional trail network. The Ottawa County Active Transportation Plan was adopted in 2018, and the Erie County Bicycle and Pedestrian Plan was updated in 2020. Both plans contain recommendations for future, current and to be constructed infrastructure projects in the MPO planning area. In addition to the county plans, the Greater Sandusky Partnership (GSP) has launched a plan to continue building out the Sandusky Bay Pathway through the MPO region, creating a 100-mile regional trail network spanning from Vermilion through Port Clinton and South to Fremont in Seneca County. The cumulative routes from these plans are depicted on the following page and excludes current sidewalk inventories. **(Fig. 7-1.1)**. Since the expansion of the MPO, partners in Erie County, Ottawa County and GSP have begun to review the regional planning of the trail network considering how these plans overlap and what changes have occurred since the plans original development, presented in Chapter 8. ERPC does not have a formal Complete Streets Policy, but encourages local project considerations based on context sensitive design. Each project looks to incorporate elements for safe access for all road users, and prioritize projects expanding bicycle and pedestrian facilities and increasing local access.

Map prepared by Erie Regional Planning Commission, and is intended for illustrative purposes only. Erie County, Ohio assumes no responsibility or liabilities for any errors or omissions contained here in.

Figure 7-1.1 Existing and Planned Bicycle & Pedestrian Facilities

ERPC MPO 2050 Long Range Transportation Plan

The key to accommodating any new bicycle and pedestrian facilities, especially those that interface with other modes of transportation, is safety. This includes managing the number of conflict points for bicyclists, such as driveways and intersections, and accommodating a consistent typical section throughout the connecting bicycle facilities. All new bicycle and pedestrian facilities should follow the recommendations offered in the US DOT Policy Statement on Bicycle and Pedestrians.

7.6 Regional Passenger Services

Aviation: Griffing Sandusky Airport in Sandusky had relocated to the Erie Ottawa International Airport that is in Port Clinton in Ottawa County. The airport is located in Danbury Township and is a crucial connection to the Lake Erie Islands. The flying service does provide charter flight services to anywhere in the United States, including Pelee Island which is in Canadian waters. 74% of flights are general aviation, with the remaining 26% of flights being air taxi.

Important to note are efforts that Erie County had put forth to secure funding for engineering and construction of an intermodal loading dock that would include a 9,000-foot runway and associated infrastructure improvements. The project location is at the National Aeronautics and Space Administration's (NASA) Plum Brook Station in Erie County, Ohio. The existing facility is well positioned with nearby access to local railroad connections and interstate and highway access. The engineering and construction did not move forward from the original effort, but conversation continues on securing connections to the facility through intermodal means.

Railroads: Norfolk Southern Corporation has had several expansion and improvement projects in Ohio in recent years; however, no projects are proposed for the Sandusky area at this time. The Bellevue Yard Expansion is the closest project to the MPO area, located south in Huron County. The project was designed to transform the facility into one of North America's largest rail-car classification and switching yards. The $160 million expansion doubled the yard's size to accommodate more traffic, and add about 38.5 miles of track and 145 miles of underground cable for communications and signaling systems.[1] With the improvements, the classification yard has been able to double their current traffic and transit times of commodities to customers will improve by one to nearly 2 days. It should be noted that in the past there has been various derailments on the west end rail network in Sandusky. Since the 2035 LRTP a grade separation project has occurred on the west end of Sandusky.

In 2008, Triple Crown Services a division of Norfolk Southern railroad announced an environmental initiative to promote and improve fuel conservation and emissions reduction. The company's initiatives focus on the environmental advantages of its hybrid RoadRailer® trailer technology. With the RoadRailer® system, each trailer is a unique combination of an on-the-road trailer and an over-the-rail car. Truckload freight is picked up from shippers and driven to Triple Crown terminals where the trailers are set on railroad wheels, called bogies. The assembled trains then travel to destination terminals where the trailers are reconnected to tractors and delivered. Unfortunately, Triple Crown announced in 2015 it was scaling back and would only be operating one line to carry automotive parts from Kansas City to Detroit. As a result, operations at the Sandusky Triple Crown facility were idled. However, Norfolk Southern was able to leverage the facility and in 2016 worked with Watco Transloading LLC to begin

[1] http://www.progressiverailroading.com/norfolk_southern/article/Construction-advances-on-NS-Ohio-yard-expansion-project--40115

origin and destination transload operations of commodities such as chemical, plastic, steel, and agricultural products.

Amtrak ridership numbers in Ohio have decreased from 163,000 passengers in 2012 to 124,000 in 2022. Two Amtrak routes service the ERPC MPO area, with boardings at the Sandusky station growing from 2,340 in 2005 to 8,400 in 2022, peaking near 10,000 in 2017. The Capitol Limited runs daily between Washington DC and Chicago and the Lake Shore Limited travels daily between Chicago and New York City. No additional service is planned to include the Sandusky Station. Almost 61% of passengers traveling to or from the Sandusky station are completing trips that are within 200 to 300 miles. The top city pair by ridership in 2008 was Sandusky – Chicago, Illinois followed by Sandusky – New York, NY.

The Sandusky rail station was built in 1892 and was renovated in 1996 by the City. AMTRAK completed an ADA compliance report that showed $956,000 worth of ADA compliance and state of good repairs were needed at the station, and at the time of the development of the 2050 LRTP, the station is undergoing renovations for drainage and ADA compliance updates. The City of Sandusky has identified a project involving the Amtrak station in its comprehensive plan. The city wishes to develop a multimodal transit facility using the existing Amtrak station. Although there are no funds dedicated at this time, the City has identified this as a short-term goal.

In 2014, the ERPC MPO, Toledo Metropolitan Area Council of Governments (TMACOG), and the Northeast Ohio Areawide Coordinating Agency (NOACA) entered into a Memorandum of Understanding to create the Northern Ohio Rail Alliance (NORA). The Alliance aggregates Ohio's four busiest passenger AMTRAK rail stations (Toledo, Sandusky, Elyria, and Cleveland) into a single rail corridor, the Toledo-Cleveland Rail Corridor. The alliance creates a unity of purpose and shared responsibility in the visioning of a transportation mode and job generator in Northern Ohio. The group has identified that improvements along the line and its stations are needed to ensure better trip times and ADA compliance for passengers. Beginning in 2022, FRA began studying four proposed routes in Ohio, including a new route from Cleveland to Detroit, servicing Sandusky and Toledo. Study and future development is ongoing at the time of this plan.

Ferry: The ERPC MPO region is home to numerous ferry services providing transit options to the Lake Erie Islands. Following the closure of the Island Rocket in 2004, the Jet Express began offering regularly scheduled ferry services. The Ferry provides passenger service to Cedar Point, Kelley's Island, and Put-In-Bay, with larger harbors in Sandusky and Port Clinton, both with available parking lots for tourists. The Kelleys Island Ferry Boat Line offers auto/passenger service daily to Kelley's Island out of Marblehead village. Miller Ferries provides daily auto/passenger ferry services to Put-In-Bay and Middle Bass Islands out of Catawba Township. Future improvements may occur at the ferry, as the roadway network crosses vehicle loading stations and heavy pedestrian traffic during peak summertime hours, and port facility upgrades would improve congestion and safety at the ferry terminal. The ferry service providers would increase service as demand rises, but has no current intentions for expansion.

Also there is passenger ferry service to and from Downtown Sandusky to Pelee Island, Ontario, Canada. The ferry service is operated by the Canadian company; Owen Sound Transportation Company. The Sandusky dock is located at the foot of Jackson Street. The ferry, MV Jiimaan, can transport 400 passengers and 40 vehicles. Sandusky has noted interest in expansion of water taxi service in Sandusky Bay to help connect communities Danbury Township and Marblehead to downtown Sandusky and Cedar

Point. The growing residential communities along the bay front includes condominium communities that would provide close access to the port in downtown Sandusky.

7.7 Freight

Ohio's business and industry depend on effective freight transportation to reach state, regional, national and global markets. Trucks move 65.7% of the total tonnage of Ohio freight, accounting for 70% of the total value. Erie County has one of the busiest through routes (I-80/I-90) in the State of Ohio for truck travel, and includes two interchanges in the MPO region along SR 4 and SR 250. SR 2 is a limited access highway that moving east-west through Erie and Ottawa County that is on the statewide strategic freight system. ERPC continues to encourage improved north-south connections to the MPO region by improving freight routes along SR 4 and SR 250. The 2025 Strategic Transportation & Development Analysis (STDA) identified these two corridors from Sandusky to Columbus as crucial connections to to reduce congestion and improve access regionally.

7.8 Land Use

Overall, residential development is the greatest growth segment across the MPO region. According to the Erie County Farmland Preservation Plan (2001), a relatively small amount of farmland was expected to be consumed on an annual basis due to stagnant population growth, limited vacancy residential development density occurring largely along municipal peripheries. Since that Plan, rural development in Erie County has largely been frontage development, lacking a significant number of subdivision developments. Ottawa County, particular the peninsula, has seen increased residential development in rural areas. Numerous subdivisions have occurred in Catawba and Danbury Township, and former residences of smaller cottages have upgraded to larger homes based on the proximity to lakefront development. Inland from the waterfront is still largely agricultural land, but Catawba Township and available land along the lake and bay front continue to see residential development of single-family homes and condominiums.

Although there is not a large degree of land consumption expected from residential uses, there are larger implications of the existing development patterns. Vermilion has seen increased interest in growth in development patterns from a sprawling Cleveland, and Ottawa Counties peninsula continues to develop with vacation and senior retirement homes. Both areas expect future suburban and exurban growth to continue, with sporadic commercial development leapfrogging agricultural areas based on the region's car centric design and high vehicle ownership. There may be additional issues associated with the urban/rural transects.

Specific areas of growth in Erie County include Route 250 near the Turnpike, and the Route 4 corridor. Limited retail development may occur and existing commercial structures may be replaced or retrofitted near the Turnpike. The Route 4 corridor may experience increased highway-oriented development over the long-term if the market demands change and infrastructure is put in place to support new development, including impacts from the STDA implementation.

Specific areas of growth in Ottawa County include SR 53 in Danbury and Catawba Township, where commercial development continues to fill in formerly agricultural land. The growing residential homes and peak tourism season to the Shores and Islands region will drive future commercial and retail demand

on the peninsulas. Development of improved infrastructure is expected as the county ensures roadway facilities can handle increased volumes, including for vehicles hauling boats and weekends with peak congestion.

Goals of the Sandusky Comprehensive Plan continue to focus around the revitalization of the downtown and Bayfront areas, as well as encouraging and managing new growth in the western part of the city. The city wishes to strengthen commercial, residential, and recreational uses in the downtown area, including adding destination points to the downtown and Bayfront areas. The western growth is to include new residential and industrial uses. These plans will increase the demand for transportation services.

7.9 Port Facilities

The MPO region is home to seven legislative ports on Lake Erie. Marblehead, Sandusky, and Huron are primarily freight ports, with Put-In-Bay, Port Clinton, Lakeside, and Kelleys Island being passenger service. In 2024, it was announce Put-In-Bay Harbor would receive $10.4 million for port upgrades that include a second dock and stone breakwater to bolster safety and resiliency at the terminal, and improve long term access to South Bass Island. Huron Harbor has largely became inactive in cargo handling and is expected to redevelop surrounding land uses for residential and commercial accommodations, primarily serving recreational boaters.

The Sandusky Harbor has three separate docks, but primarily uses its main dock for coal and salt export, with limited inbound goods and the other two docks. Current trends are for heavy coal exports to continue from the docks, but future expanded port operations are available at the other docks. No projects are planned at this time.

An additional challenge Lake Erie port facilities face includes handling dredged materials from the US Army Core of Engineers (USACE). State law prevents the USACE from returning dredged materials to Lake Erie, forcing ports to develop new options for storing the dredged sediment. Sandusky, in partnership with OEPA, ODNR, and USACE developed the Cedar Point Causeway Wetland Restoration Project in 2022, utilizing dredged material from Sandusky Bay to develop and restore a wetlands that creates new habitats and improves water quality while also repurposing dredged material. Additional in-water wetlands are planned as part of the Sandusky Bay Initiative. Huron Harbor has also began dredging less material for a depth of 14 feet as it no longer needs to accommodate large freighters as port services continue to change.

7.10 Environmental

In order to complete the environmental analysis, ERPC prepared a series of maps of the region with environmental layers, these maps are located in the Environmental Maps Appendix. Five categories environmental categories were looked at:

- Streams and Wetlands (includes wetlands and 10 Digit Hydrologic Unit Code Number (HUC) maps)
- Threatened and Endangered Species (includes threatened/endangered species map)

- Mitigation (includes conversation/park areas map, deciduous forest map, and national register sites map)

- Cultural Resources (includes conservation/park areas map, deciduous forest map, and national register sites map)

- Other Mitigation (includes superfund, however no sites currently exist in ERPC region)

The universe of alternatives includes a total of 106 projects in this transportation plan. From the compiled maps, as outlined above, an analysis was completed to identify the projects that could have potential impacts on the environmental issue locations. This part of the analysis was completed to illustrate how often a project may have environmental implications and the need for assessment and mitigation measures to be employed as projects move from the LRTP to the Transportation Improvement Program (TIP).

To complete the summary of the number of recommended projects near the environmental issue location, maps were created for each environmental issue layer. If projects were located in or near (within ½ mile) of an identified environmental area it was counted as a project with potential impacts specific to that environmental issue. A summary is provided below showing the total number of projects near each environmental issue location.

Environmental Issue	Number of Projects Near Environmental Issue Location
Potential Wetland	104
Conservation Areas	29
Cultural Resources	34
Deciduous Forest	93
Threatened or Endangered Species*	106

This analysis provides a beginning step in ensuring projects in this plan are environmentally responsible. All projects are required to minimize, avoid and/or mitigate environmental impacts as outlined in the existing conditions section of this plan. This plan also supports energy conservation initiative with special emphasis on those being taken in the MPO region related to wind energy, biofuels, and other alternative fuels.

*The entire MPO Planning Area is within numerous endangered species ranges, including the Salamander Mussel and Northern Long-Eared Bat.

7.11 Security

ERPC has no direct role in responding to emergencies. In the event of an incident, Evacuation Policies and Procedures provided by local county agencies including Erie County Emergency Management Services (EMA) and Ottawa County EMA provide a mechanism for assessing the problem and determining resources available to address those problems. Local plans have outlined such policies and procedures. Activities associated with the evacuation focus not only on residential areas but provides procedures for evacuation of those facilities that may require special consideration (schools, nursing homes, day care centers, shopping and energy facilities). Additionally, procedures are outlined for those

special population sub-groups that may require special consideration in evacuation planning. Those individuals who are elderly have a tendency to resist evacuation, and it will be important to stress that degree of perceived risk to this group. Individuals who are physically handicapped, as well as those individuals who are blind, may require additional assistance during evacuation. Individuals who are deaf or non-English speaking may require interpreters or other arrangements for the delivery of warning messages. General procedures for evacuation as follows:

1. The incident Commander determines if, and when, an evacuation will take place.

2. Law enforcement will have the responsibility of executing the evacuation.

3. Emergency Management Agency (EMA) and the Firelands Chapter of the American Red Cross will assist with special evacuation needs.

4. The American Red Cross will provide shelter for evacuees.

5. Local Health Departments will work with the Ohio Environmental Protection Agency and the Incident Commander to determine when the evacuees will be permitted to return.[2]

Guidance is also provided on the process for dissemination of warning information from response agencies to the general public in the event of an incident. "Public notification is accomplished by either the Emergency Alert System, cable television break in, regular media broadcasts, and/or door-to-door notification. The information will be disseminated in a timely manner, dependent upon the circumstance and size of the incident.

a. Personal Notification – In the event of an incident that requires an evacuation, a means of notification is to go door-to-door with a personal message. The law enforcement will not be utilized if they must work in a plum and/or hot zone.

b. Cable Television Break-In – The EMA or County Sheriff is capable of activating this system.

c. Emergency Alert System (EAS) – The EMA or County Sheriff is capable of activating the EAS. The EAS can be activated to broadcast warnings over local radio and cable stations.

d. Media Broadcast – The Public Information Office on scene will follow Annex D procedures."[3]

In conclusion, efforts regarding security are sensitive in nature. However, this plan supports efforts that coordinate local efforts with those at regional and state levels. ERPC Staff will continue to assist with the Local Emergency Planning Committee (LEPC). Additionally, the MPO will continue its support of training initiatives to insure efficient emergency response by the transportation interests. Lastly, the MPO will continue to network with emergency management authorities and transportation agencies in developing security implementation initiatives for the transportation system.

[2] 2002 Chemical Emergency Response and Preparedness Plan, p. O-24
[3] 2002 Chemical Emergency Response and Preparedness Plan, p. O-14

Chapter 8: Transportation Alternatives

8.1 Overview

A universal set of alternatives was drafted based on the results of the following:

- Public Involvement Process
- Public Meetings
- Stakeholder interviews
- Special Meetings
- Review of existing and future transportation and land use conditions throughout Erie County and Vermillion.
- Ability to meet Goals and Objectives of the plan
- Ability of the county, state and federal governments to fund the transportation improvement projects.

The universe of alternatives is shown in **Figures 8-1.1, 8-1.2, 8-3 and 8-1.4.** In order to measure the effectiveness of any alternative drafted for the LRTP, it is important to evaluate each alternative against a set of criteria to ensure it meets the goals and objectives of the study. As shown in **Table 8-1.1** performance measures were established reflecting the overall Goals and Objectives of the LRTP. The evaluation table has nine category headings based on the goals and objectives developed for the Long Range Transportation Plan. The transportation options were evaluated based on a five-point system as follows:

- Very Good = 5 points
- Good = 4 points
- Fair = 3 points
- Poor = 2 points
- Very Poor = 1 point

The Technical Advisory Committee reviewed all projects, and staff ranked any alternative drafted. Each category has five potential weights- representing how well the alternative meets that goal/objective- ranging from ‘very good’, ‘good’, ‘fair’, ‘poor’, and ‘very poor’. To get a weighted sum, each ranking was given a numerical value ranging from one through five. The difficulty in using a weighted system of alternatives is that the connectivity between different projects is not highlighted. Each project is ranked based on its own merits. These rankings were used to help with the decision-making process of where to place projects into the timeline for implementation, along with other factors including project dependencies and costs. The costs of the various transportation improvement projects were assessed relative to the ability to fund them within the 25-year planning horizon and the level of relief of an identified transportation issue. This methodology balances the potential for improvement of the transportation system. The system plan included as the Recommended Plan was the concept that established the most reasonable balance between cost and system effectiveness.

8.2 Table 8-1.1: Criteria and Performance Measures

Goal	Goal Statement	Objectives	Performance Measures
Freight Movement & Economic Vitality	Improve the local freight network & support the economic vitality of the MPO area	• Integrate land use and freight transportation planning processes • Invest in and promote region's multimodal and intermodal capabilities • Improve freight mobility, safety, and operations • Expand regional freight planning capabilities • Increase freight awareness among all stakeholders, including the public • Foster strategic partnerships and alliances for enhanced freight movement	• Minimize congestion on major corridors when feasible • Support projects that increase levels of private sector investment in transportation improvements • Aid mobility by showing an increase in freight traffic volumes • Encourage partnerships with the freight community stakeholders • Increased availability & use of intermodal facilities including maritime, rail & air facilities • Strive for project selection that measures freight traffic volume • Expand availability & participation in Freight Advisory Committee
Safety	In the ERPC's transportation network achieve a reduction in fatalities & serious roadway injuries for motorized and non-motorized users	• Encourage clear signage on roadways throughout the MPO area • Improve hazardous intersections • Support projects that increase safety • Use transportation project selection criteria to accentuate projects that encourage safety • Promote educational safety programs	• Reduce the number of fatalities & serious injuries in the ERPC area • Reduce the number of fatalities & serious injury per VMT in the ERPC area • Expand availability & participation of community members in the citizen/safety committee meetings

Goal	Goal Statement	Objectives	Performance Measures
Congestion Reduction	Reduce congestion in the MPO area	• Use transportation project selection criteria to promote alternative transportation & other congestion relief methods • Enhance transit services to promote service to major employment centers, educational facilities, medical offices, commercial developments & tourist destinations • Maximize bicycle & pedestrian connections to roadways, transit services & area amenities such as the waterfront & regional parks • Encourage communities to incorporate bicycle & pedestrian facilities within major new residential & commercial developments	• Demonstrate an increase in transit ridership • Increase the percentage of persons using alternate modes, especially during peak hours • Support projects that show a decrease in travel time between regional/major activity centers • Incorporate multi-modal components in project planning when feasible • Encourage an increase in miles for bicycle & pedestrian facilities • Reduce travel time on major corridors • Decrease congestion on major corridors • Support access management techniques
Infrastructure Condition (Preservation)	Maintain the existing transportation infrastructure assets in a state of good repair	• Use transportation project selection criteria to accentuate system preservation projects • Support efforts for the proper maintenance of the existing transportation system & the use of the non-motorized methods of transportation to reduce stress on the current system	• Improve the conditions of roads/bridges by functional classification • Support MPO sponsored projects that encourage maintenance or preservation aspects • Promote efficient land use patterns when feasible

Goal	Goal Statement	Objectives	Performance Measures
System Reliability	Improve the efficiency of the local surface transportation system	• Use transportation project selection criteria to accentuate projects that improve the efficiency of the local transportation system • Reduce travel time & delays when feasible • Implement measures to mitigate traffic congestion during peak tourism season • Support improved east-west travel through the MPO, and interregional north-south connections to Erie and Ottawa County • Identify developing & expanding corridors & implement appropriate regulations prior to development occurring • Encourage alternative modes for transport for persons and goods.	• Maintain the conditions of roads/bridges by functional classification • Prioritize project selection for projects that improve system efficiency for peak hourly volumes • Encourage implementation of complete streets policy based on local context for all people and goods • Improve access to transportation system for traditionally underserved or disadvantaged populations.
Reduced Project Delivery Times	Reduce project costs, promote jobs & the economy, & expedite the movement of people & goods by accelerating local project completion through the elimination of delays in the process	• Support efforts that coordinate local policies & projects with those at regional & state levels • Encourage expedited project delivery. • Use transportation project selection criteria to promote reduced project delivery times that expedite the movement of people & goods	• Monitor project delivery and encourage projects to move up when eligible • Prioritize project sponsors for limited project delays • Coordinate projects components with various entities to limit construction impacts

Goal	Goal Statement	Objectives	Performance Measures
Environmental Sustainability	Protect the environment in the MPO system & enhance the transportation system's performance simultaneously	• Use transportation project selection criteria to promote alternative transportation methods &/or projects that protect & enhance the environment • Maintain a planning process that integrates & coordinates transportation planning with land use, water & natural resource conservation • Minimize, avoid &/or mitigate environmental impacts of transportation improvements • Provide equitable & environmentally friendly just transportation facilities & services • Promote consistency between transportation improvements, local planned growth & economic development patterns • Support energy conservation initiatives with special emphasis on those being undertaken in the MPO region related to wind energy, biofuels, & other alternative fuels	• Show the preservation of neighborhoods and cultural/historic resources & or sites • Document mitigation steps when (if) adversely impacting the environment • Improve interagency communication • Maintain a relative distribution of positive & negative impacts by socio-economic groups with consideration of existing communities • Improve efforts supporting energy conservation initiatives • Minimize impacts to established neighborhoods

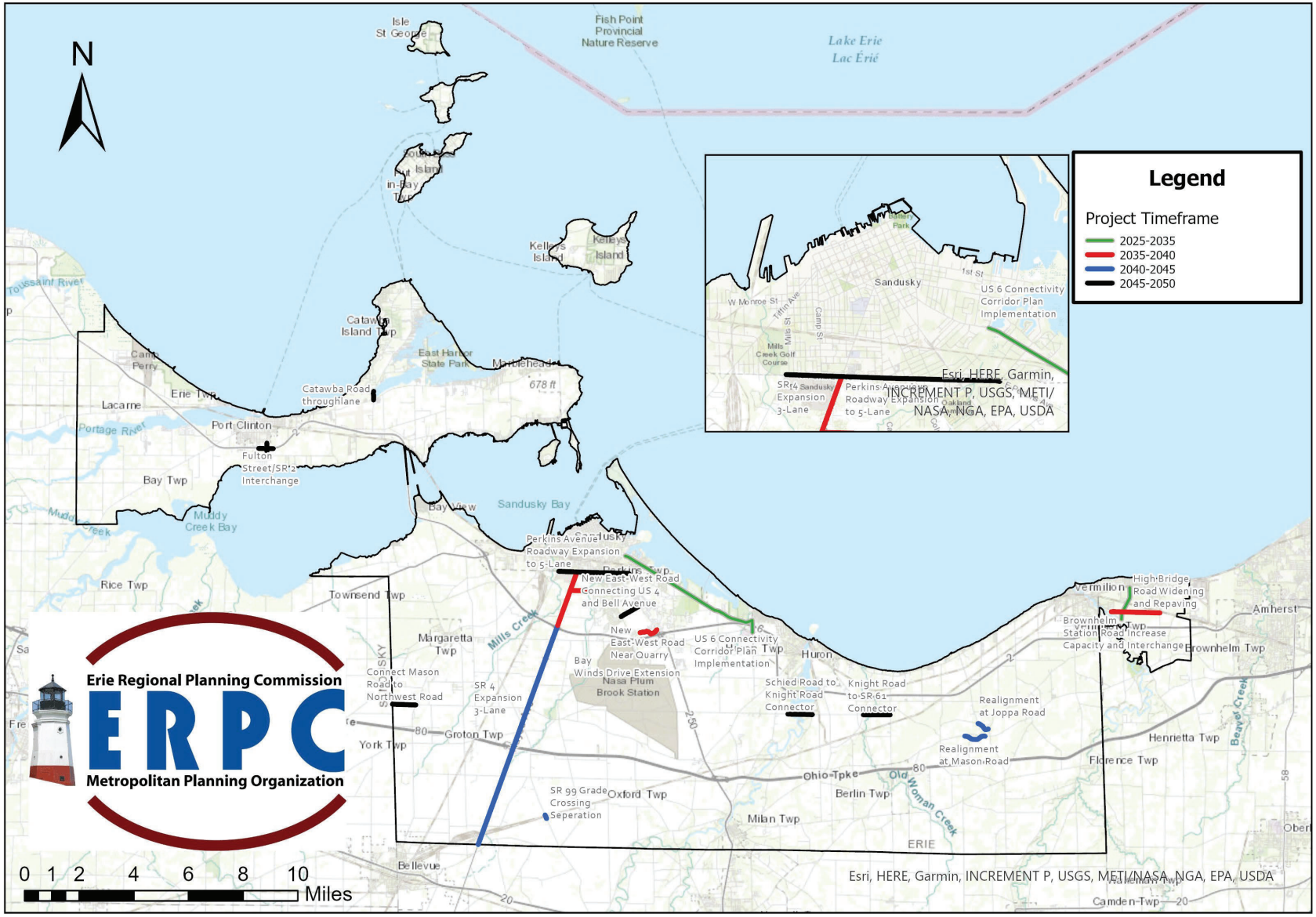


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Figure 8-1.1: Universe of Alternatives Expansion Projects

ERPC MPO 2050 Long Range Transportation Plan

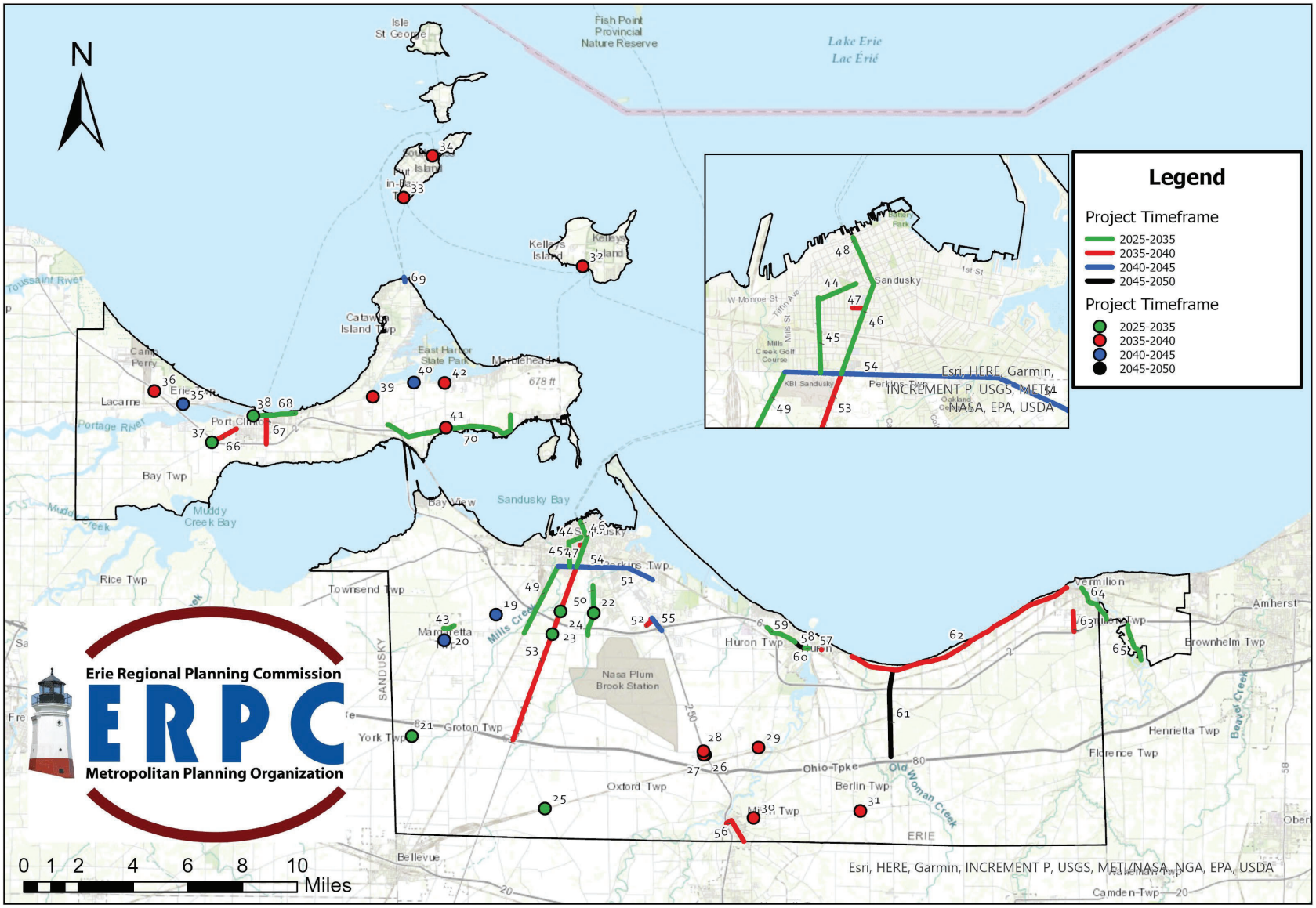

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Figure 8-1.2: Universe of Alternatives Preservation Projects

ERPC MPO 2050 Long Range Transportation Plan

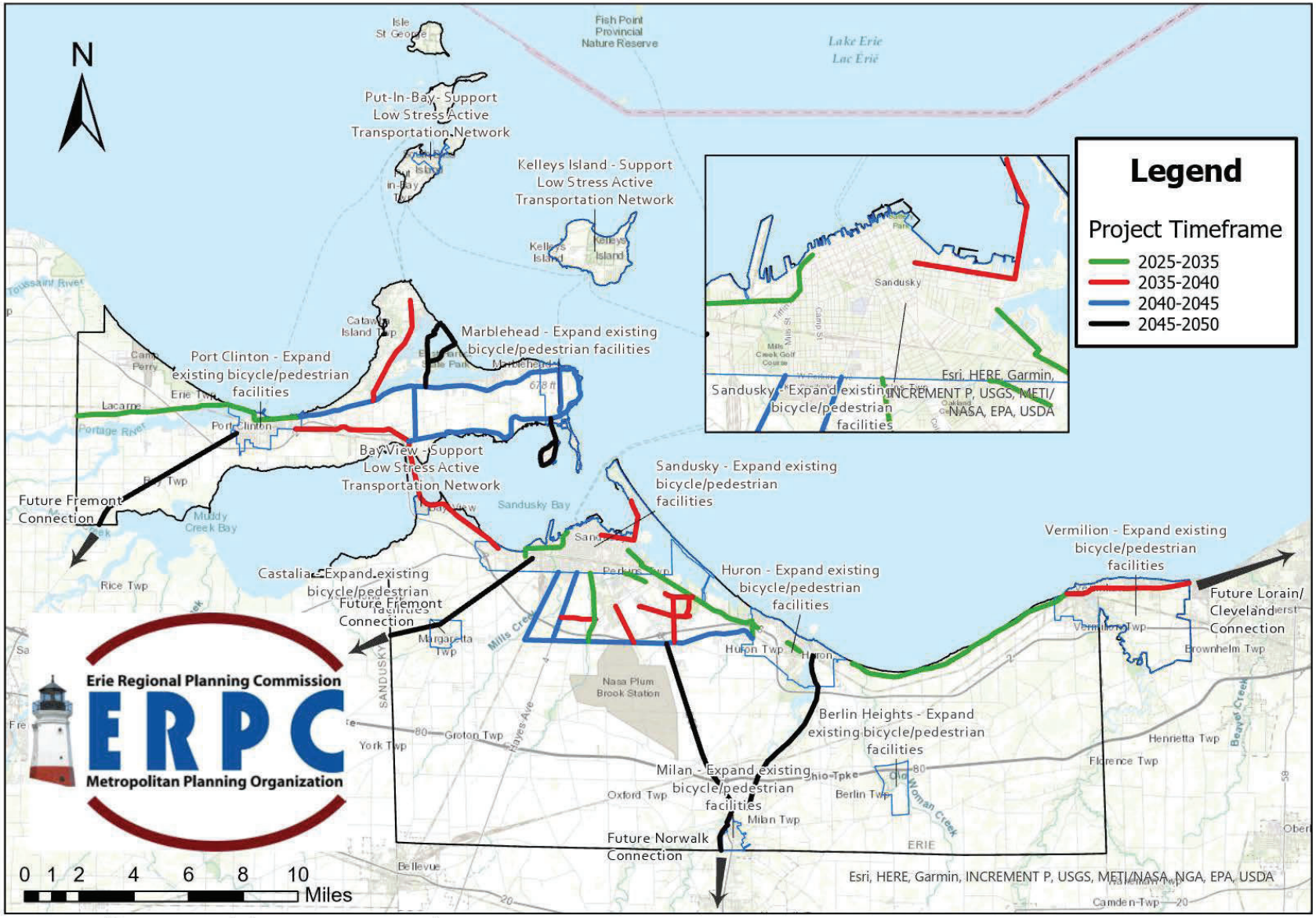

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Figure 8-1.3: Universe of Alternatives Non-Motorized Projects

ERPC MPO 2050 Long Range Transportation Plan

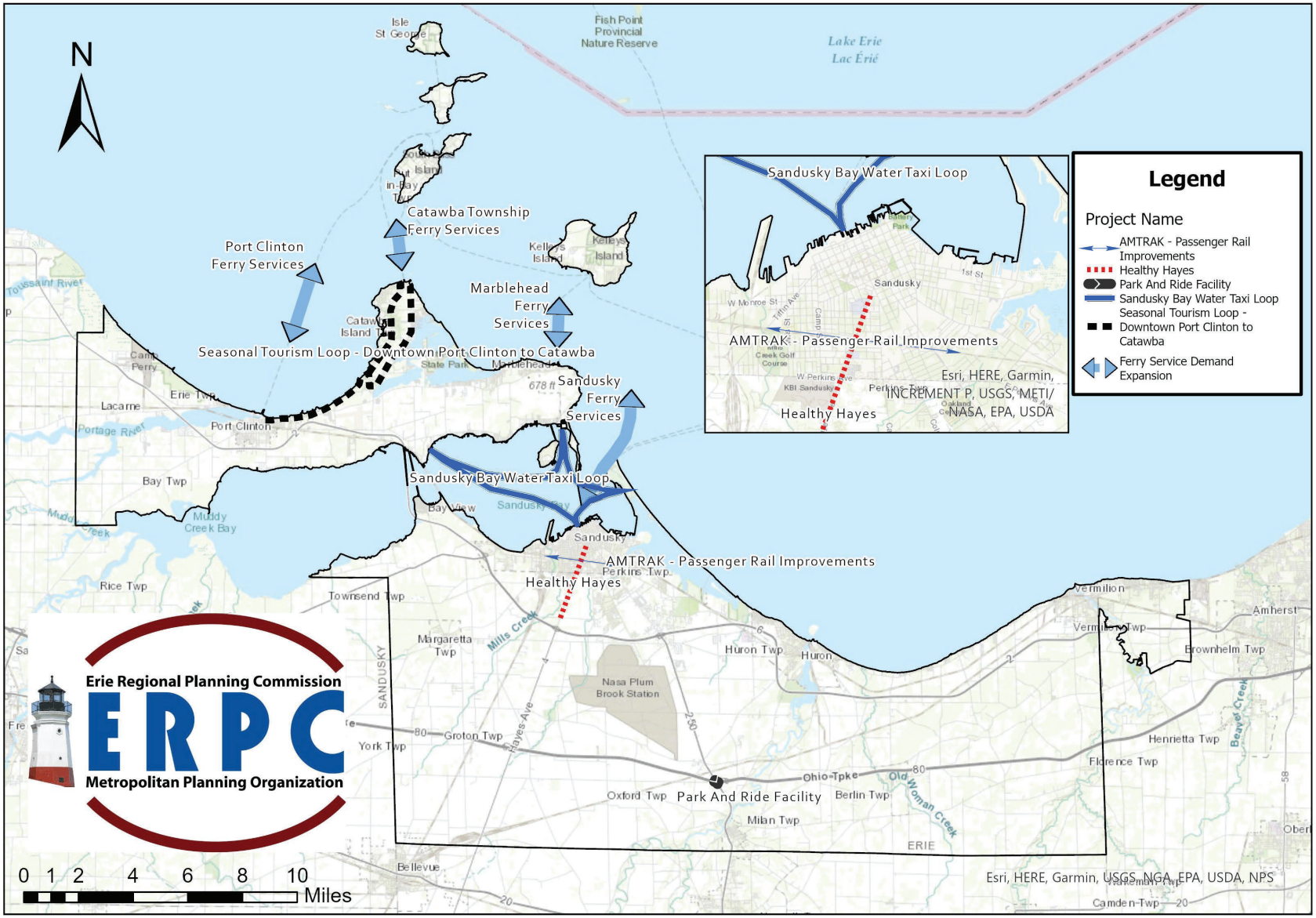

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Figure 8-1.4: Universe of Alternatives Transit Projects

ERPC MPO 2050 Long Range Transportation Plan

Chapter 9: Recommended Transportation Plan

This chapter summarizes the LRTP recommended transportation plan. The LRTP addresses all modes of transportation and is fiscally constrained. For the purpose of the LRTP analysis, projects were grouped into one of the following four categories:

Table 9-1.1: Project Length

Project Categories	Length Of Construction Period	Time Period
1) Short-Term Projects	Within 10 years	Between 2025 & 2035
2) Mid-Term Projects	10-15 Years	Between 2035 & 2040
3) Mid-Long Term Projects	15-20 Years	Between 2040 & 2045
4) Long-Term Projects	20 Years or Greater	2045 & Beyond

It should be noted that the categories were used merely for analyzing the various transportation improvements and does not guarantee that a specific roadway improvement will be constructed or that it will be constructed during the identified timeframe. It should be further noted the design, engineering, and construction of the specific roadway improvements identified in this LRTP depend heavily on the availability of transportation funds. The improvements and policies are described in the following sections and strive to meet the plan's stated goals and objectives (Chapter 2). This plan's goals and objectives were aligned with ODOT's long-range plan priorities as identified in the Access Ohio 2050 planning document to ensure that ERPC's regional future potential projects and policies are compatible with those of the state.

9.1 Roadway Improvements

The **overall roadway policy guidelines** consist of the following:

- Encourage the adjusting of all roads to recommended widths based on ODOT design guidelines.
- Encourage the preservation of the transportation network by expansion and adaptation of existing facilities to meet transportation needs, as opposed to the creation of wholly new facilities
- Support the recommendations from the US 6 Corridor Improvement Study – Phase 2
- Encourage the creation and implementation of access management regulations for municipalities and villages.

Improvements to Roadways include preservation and expansion projects. Typical expansion projects include the addition of a center lane. **Figure 9-1** and **Figure 9-2** depict the recommended roadway preservation and expansion projects.

One significant roadway project included in the expansion projects is the consideration of a new interchange in Port Clinton at Fulton Street and SR 2. The project was introduced by the City of Port Clinton based on local challenges with the existing system. This included emergency vehicle access to the hospital along Fulton Street, freight traffic impacted by the railroad overhead bridge on Fulton, and vehicular congestion issues during peak hours caused by the school and hospital campuses. Regionally,

improved access to SR 2 from Fulton Street would create an additional entrance and exit into the city, that are all currently bottlenecked on routes at the east and west end of the city. The proposal is in early stages of consideration, and would require a significant level of analysis and considerations of alternatives before moving forward with the project.

9.2 Operational/Congestion Management Strategies

The **overall operation congestion management strategies** consist of the following:

- Encourage the adjustment of all roads to recommended widths based on ODOT design guidelines
- Encourage the preservation of the transportation network by expansion and adaptation of existing facilities to meet transportation needs, as opposed to the creation of wholly new facilities
- Support the recommendations from the US 6 Corridor Improvement Study – Phase 2
- Encourage the implementation of access management regulations for municipalities and villages
- Deployment of ITS technology and implementation of access management techniques along major corridors in the MPO, including US 250, US 6, and SR 4
- Promoting transit use to tourist attractions and offering employee incentives to use transit for everyday travel

Also, important to note is that project sponsors are responsible for obtaining any environmental type permits as required for proposed projects. For example, an USACE permit according to Section 401 of the Clean Water Act if applicable to the project (as outlined in Section 5.10 of this document).

9.3 Transit Improvements

Public transportation provides mobility to older adults, disabled persons, and disadvantaged persons as well as basic access to employment opportunities, health care facilities, shopping activities, and community services for the population as a whole.

Overall transit policy guidelines consist of the following:

- Work with local transportation/transit stakeholders to secure funding for transit services
- Support the Sandusky Transit System's initiatives to update, collaborate, improve, and expand services
- Participate in the update of the Coordinated Public Transit-Human Services Transportation Plan every three years or as requested by ODOT
- Support maintaining the transit mobility manager and communication between transit providers
- Explore, expand, and streamline cross county transfers

Key transit projects under the expansion of service include the following project improvements:

Service Expansion: Service expansion involves the curb-to-curb service as it currently exists in the City of Sandusky and portions of Perkins Township, the City of Huron, and the City of Vermilion as provided by the **Sandusky Transit System (STS).** As a means of focusing on the overall transit policy guidelines, it is assumed that as new services are implemented; the level of service associated with these newer services will be improved as funding permits. This would include expanding the hours of service that transit is available and also improving the flexibility of scheduling demand response trips.

It would also allow a minimum level of service to more areas of the entire County while continually striving to improve the existing services. Additionally, transit waiting area improvements should be made as funding permits.

Intermodal Connections: A key to facilitating transportation in the region is the development of intermodal transfer points in and around the Village of Milan. A possible location for a facility would be in **Downtown Milan** is at Church Street and Main Street or near the Interstate 80 and US 250 Interchange. These intermodal facilities could also serve as a stop for the **MegaBus** service and could include other amenities such as a **park-and-ride lot** that could serve commuters traveling to regional destinations like Toledo, Akron, or Cleveland via carpools or vanpools. They could also serve as transfer points for coordinated human service agency transportation. Additionally, if a MegaBus stop were to locate in the county this could help facilitate a link between the region and the existing MegaBus stops in Cleveland and Toledo.

Since the 2040 Long Range Plan update, the Sandusky Transit System has built a **transit hub** that is housed with **AMTRAK** and **Greyhound**. These intermodal connections have expanded transit options in the area. AMTRAK is currently in the middle of station upgrades, including ADA compliance and drainage repairs. ERPC MPO has long supported AMTRAK and **regional passenger rail** for increased connections to Toledo, Cleveland, and states beyond in a more efficient manner. Additionally, Sandusky Transit System has expressed an interest in expanding its services to **water taxis**. This service would be located downtown along the waterfront. This service would assist in facilitating travel between areas such as Port Clinton, Catawba Island, Kelleys Island, and Put-In-Bay.

Fixed Route Corridors: The Sandusky Transit System (STS) has been operating multiple (currently five interloping) **fixed routes** since the 2045 Long Range Plan Update. Lines are now color-coded and have designated pick up schedules. These routes offer transportation to work as well as a shopping and medical circulator service for those in the Sandusky and Perkins areas. In addition to the current fixed route in place, the 2050 LRTP Update calls for the development of a corridor fixed-route transit service along **SR 4 creating a medical corridor** from Firelands Hospital to NOMS.

Alternative Fuels: STS continues to research alternative fuel options for fleet to help reduce overall costs and possible roadway emissions. STS had previously made consideration for moving the fleet towards compressed natural gas (CNG) and propane vehicle. As funding is made available and fleet turnover continues, the 2050 LRTP calls for support of considerations for alternative fuel vehicles for the STS fleet as funding is made available.

Transportation Coordination: In 2018 Erie County was notified that they were assigned a **mobility manager** from the **Great Lakes Community Action Partnership**. A mobility manager had been supported and recommended in the 2040 Long Range Plan Update. Continued support of the mobility manager is important in the region as they provide travel training, updates from ODOT transit, and assists in coordination efforts. Support of the Mobility Manager is consistent across Erie and Ottawa County.

It is also recommended that the **Erie County Coordinated Transportation Plan** and **Ottawa County Coordinated Transportation Plan** to be maintained. The plan is important for local organizations to be eligible for certain FTA funding programs (5310). In 2018, ODOT created a standardized template for the Coordinated Transportation Plan and implemented new requirements for participants. Prior to the

standardized template each organization created their own which created a lot of variability. Along with the format changes ODOT also requested the reboot of the transit advisory committee so that further transit collaboration and coordination could occur. Another requirement is that the plan is reviewed annually and updated every three years with committee members' involvement. The mobility manager has assisted ERPC staff with these efforts.

Seasonal Transit (Tourism) Support: It is important to continue seasonal transit service to Cedar Point from downtown Sandusky and the fixed-route transit service to add more vehicles to the route for improved service frequency. Tourism is very important to the MPO region's economy, including in the Catawba Peninsula, downtown Sandusky and Cedar Point Causeway. The continued support of this service provides a key connection between hotels and Cedar Point for tourists, but also as a means of getting seasonal Cedar Point employees to work from outlying areas. The Sandusky Transit Systems has added various fixed-line services that travel to the **major tourist destinations** on major corridors including **US 250, Perkins Avenue, downtown Sandusky** and **SR 6**. Additionally, ERPC MPO will look to support efforts to support tourism transit in Ottawa County from **downtown Port Clinton** to various restaurants and wineries in Catawba and Danbury Township.

9.4 Pedestrian and Bicycle Improvements

Existing bicycle travel within the MPO consists of primarily on on-road bikeway, but also consists of some off-road bikeway. The recommended plan for pedestrian and bicycle (non-motorized) improvements are shown in **Figure 9-4.1.** The MPO's recommended plans for the non-motorized network comes from the **2018 Ottawa County Active Transportation Plan**, **2020 Erie County Bicycle and Pedestrian Plan,** and review by stakeholders on the ERPC MPO Bicycle and Pedestrian Subcommittee. Some alternative routes were also listed within the plan by veteran bicyclists. These routes were not listed in the cost estimates chart.

Overall Non-Motorized Policy Guidelines:

- Build off the existing bicycle/pedestrian facility system as rated in the Erie County **2020 Bicycle and Pedestrian Plan Update** and **2018 Ottawa County Active Transportation Plan**
- Continue **public outreach education** efforts through Active Transportation Month and the ERPC website
- Continue meeting and working with the **Bicycle and Pedestrian Advisory Committee** (established in 2015)
- Continue **working with local jurisdictions and agencies** to support bicycle and pedestrian improvement efforts
- Support local **complete streets** efforts

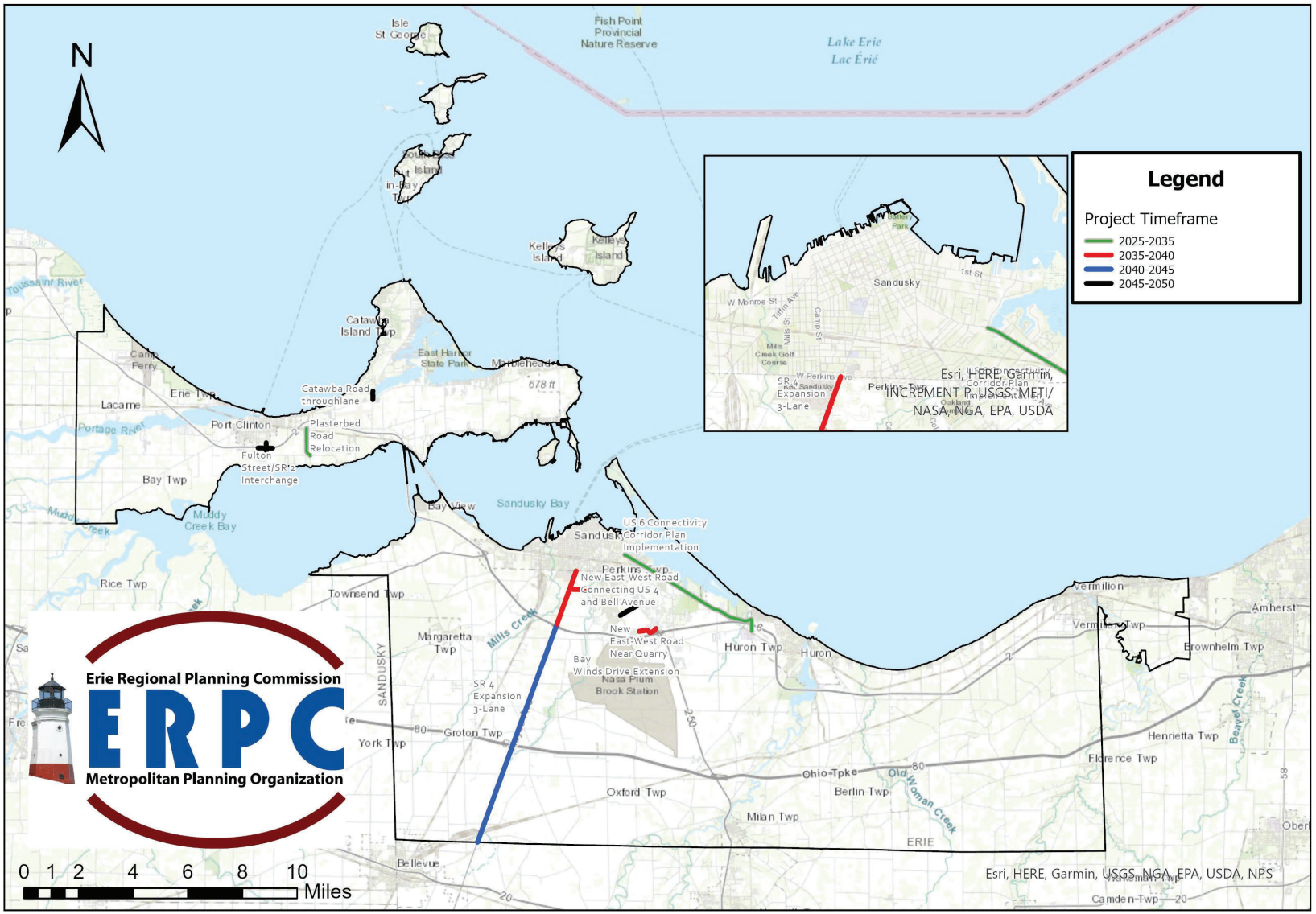

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Figure 9-4.1: Recommended Expansion Projects

ERPC MPO 2050 Long Range Transportation Plan

Table 9-4.1 Expansion Projects

Project Number	Location	Project Name	Project Description	Project Timeframe	Planning Level Cost*
1	Groton Township	SR 4 Expansion 3-Lane	Expansion of SR 4 and prioritized access management to improve north-south freight and peak summer travel	2040-2045	$ 14,617,356.00
2	Perkins Township	SR 4 Expansion 3-Lane	Expansion of SR 4 and prioritized access management to improve north-south freight and peak summer travel	2035-2040	$ 10,920,079.30
3	Perkins Township	SR 4 Expansion 3-Lane	Expansion of SR 4 and prioritized access management to improve north-south freight and peak summer travel	2040-2045	$ 17,299,469.42
4	Perkins Township	New East-West Road Near Quarry	Future connection from Milan Road/US 250 to Columbus Avenue following the useful life of the quarry	2045-2050	$ 2,667,672.73
5	Perkins Township	US 6 Connectivity Corridor Plan Implementation	Installation of 6-roundabouts and lane widening and turn lanes to improve roadway safety and congestion	2025-2035	$ 53,809,199 Includes $24.5 Million BUILD Grant
6	Perkins Township	New East-West Road Connecting US 4 and Bell Avenue	East-West Connection extending Bell Avenue to Hayes Avenue/US 4 in Perkins Township	2035-2040	$ 2,924,510.36
7	Perkins Township	Bay Winds Drive Extension	Extending the Bay Winds Drive Roadway to Columbus Avenue to improve east-west connections	2035-2040	$ 2,544,683.28

Project Number	Location	Project Name	Project Description	Project Timeframe	Planning Level Cost*
8	Port Clinton	Fulton Street/SR 2 Interchange	New Interchange at SR 2 and Fulton Street on Port Clinton's South End	2045-2050	$ 45,000,000.00
9	Catawba Township	Catawba Road throughlane	Addition of throughlane/turn lanes to address congestion created by the West Harbor bottleneck	2045-2050	$ 3,394,725.55
10	Portage Township	Plasterbed Road Relocation	Relocation of Plasterbed Road to the west and closure of old roadway due to abandoned gypsum mines in area.	2025-2035	$ 15,250,000.00
*Cost estimates were identified through ERPC MPO TIP when available					

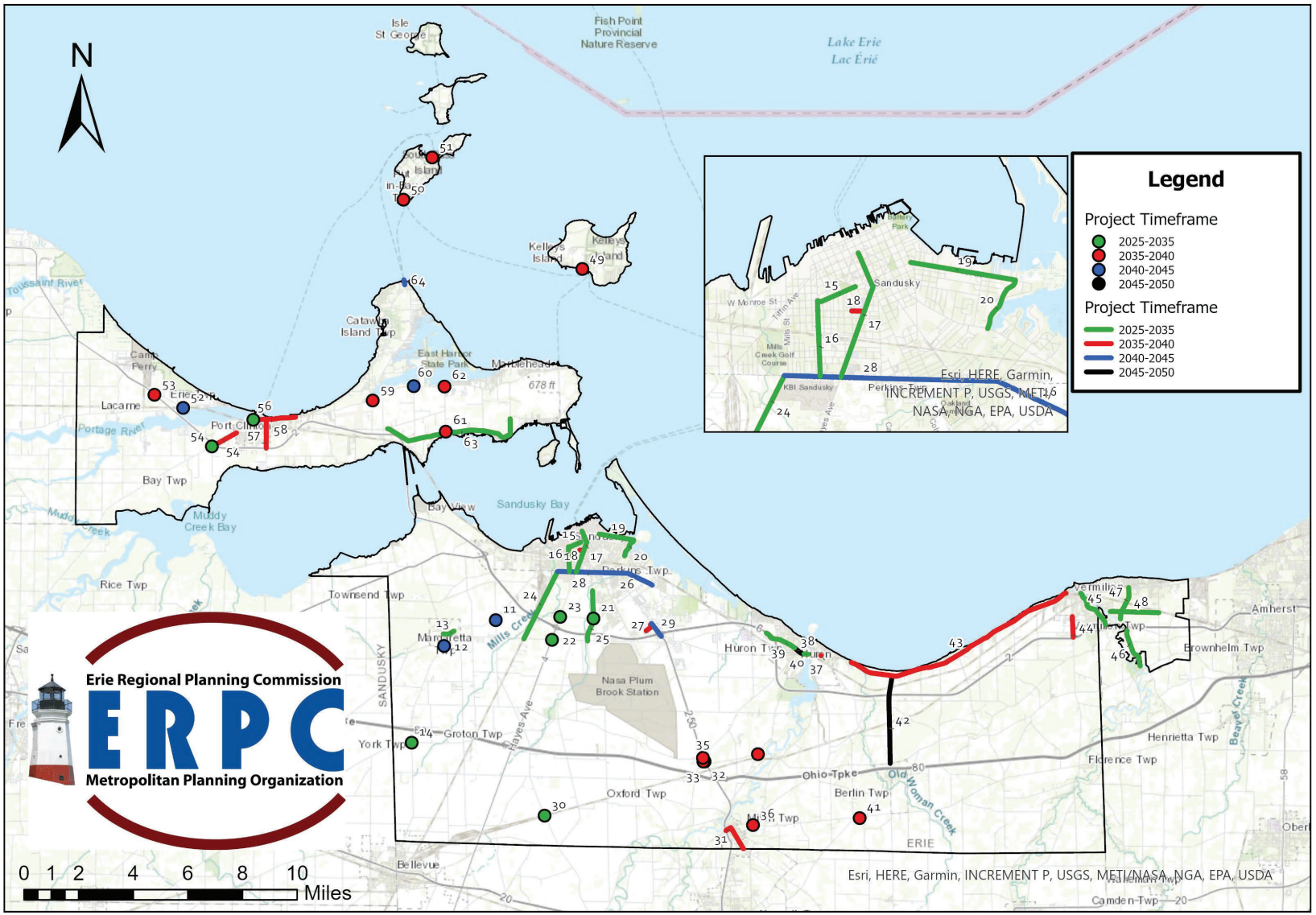

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Figure 9-4.2: Recommended Preservation Projects

ERPC MPO 2050 Long Range Transportation Plan

Table 9-4.2 Preservation Projects

Project Number	Location	Project Name	Project Description	Project Timeframe	Planning Level Cost*
11	Margaretta Township	Intersection Improvements - SR 101 at Bardshar Road	Safety improvements at signalized intersection along SR 101	2040-2045	$ 750,000.00
12	Village of Castalia	Intersection Improvement S. Washington Street at W. Lucas Street	Safety improvements at signalized intersection along SR 269	2040-2045	$ 1,050,000.00
13	Village of Castalia	Main Street Resurfacing	Resurfacing in downtown Castalia from Barden Street to S. Washington Street/SR 269	2025-2035	$ 169,201.05
14	Groton Township	Intersection Improvement - SR 269 and Portland	Convert Two-Way stop-controlled intersection into single-lane roundabout	2025-2035	$ 4,312,720.00
15	City of Sandusky	W. Monroe Preservation	Resurfacing and improvements along W. Monroe Street from Camp Street to Poplar Street	2025-2035	$ 1,697,793.00
16	City of Sandusky	Camp Street Road Rehabilitation	Phased repaving of Camp Street from Monroe Street to Perkins Avenue	2025-2035	$ 407,039.39
17	City of Sandusky	Hayes Ave/Columbus Ave Roadway Preservation	Urban Paving along SR 4 in City of Sandusky From Perkins Ave to Washington Row	2025-2035	$ 1,791,720.00
18	City of Sandusky	Tyler Street Safety Improvements	Pedestrian Countermeasures along Tyler Street at the Firelands Regional Medical Center Campus	2035-2040	$ 61,885.16

19	City of Sandusky	First Street Paving and Bikepath	Repaving First St and adding extending multimodal facilities as part of the Sandusky Bay Pathway	2025-2035	$	1,603,235.64
20	City of Sandusky	Cedar Point Drive Resurfacing	Repaving Cedar Point Drive from First Street to Cleveland Road	2025-2035	$	1,361,107.08
21	Perkins Township	Intersection Improvements - Campbell St and Strub Rd	Replacing signalized intersection with single-lane roundabout	2025-2035	$	2,322,000.00
22	Perkins Township	Intersection Safety Improvements - Strub Road and SR 4	Replacing signalized intersection with single-lane roundabout	2025-2035	$	4,000,000.00
23	Perkins Township	Intersection Safety Improvements - Bogart Road and SR 4	Replacing signalized intersection with single-lane roundabout	2025-2035	$	4,625,000.00
24	Perkins Township	Old Railroad Road Preservation	Old Railroad Resurfacing and Bike path accommodations	2025-2035	$	1,106,840.70
25	Perkins Township	Campbell Street Preservation	Resurfacing and installation of new sidewalks from Bogart Road to Bell Avenue	2025-2035	$	1,179,682.00
26	Perkins Township	Perkins Avenue Preservation	Perkins Avenue Resurfacing and Access Management to help manage roadway safety and congestion	2040-2045	$	7,888,846.12
27	Perkins Township	Crossings Road Resurfacing	Repaving and preservation of Crossings Road west of US 250	2035-2040	$	296,502.71
28	Perkins Township	Perkins Avenue South Side Walkways and Preservation	Perkins Avenue Resurfacing and installation of sidewalks and crosswalks	2040-2045	$	3,305,096.46

Project Number	Location	Project Name	Project Description	Project Timeframe	Planning Level Cost*
29	Perkins Township	US 250 Safety Improvements	Convert three leg stop-controlled intersection into single-lane roundabout	2040-2045	$ 5,600,000.00
30	Oxford Township	SR 99 - Grade Crossing Improvements	ITS Systems for advanced warning of blocked rail crossings along SR 99	2025-2035	$ 250,000.00
31	Village of Milan	Access Management Study through Milan	Review of major State Routes in Milan for improved freight and pedestrian traffic through the village	2035-2040	$ 100,000.00
32	Milan Township	Intersection Improvements - 250 at Huron Avery Road	Safety Improvements at US 250 and Huron Avery Road	2045-2050	$ 750,000.00
33	Milan Township	Intersection Improvements - US 250 at Mason Road	Safety Improvements at US 250 and Mason Road	2035-2040	$ 750,000.00
34	Milan Township	Intersection Improvements - Mason Road at Kelley Road	Roadway realignment and intersection improvements at Mason Road and Kelley Road	2035-2040	$ 750,000.00
35	Milan Township	Resolve Alignment Issue - SR 13 and Mason Road	Replacing signalized intersection with single-lane roundabout	2025-2035	$ 4,000,000.00
36	Milan Township	Resolve Alignment Issue: River Road, Berlin St., and SR 113	Roadway Realignment for improved intersection conditions at Berlin Street and River Road	2035-2040	$ 750,000.00
37	City of Huron	Berlin Road and US 6 Safety Improvements	Safety and congestion improvements at the Cleveland Road/US 6 and Berlin Road intersection	2035-2040	$ 92,194.62

Project Number	Location	Project Name	Project Description	Project Timeframe	Planning Level Cost*
38	City of Huron	Route 6 Preservation and Rehabilitation	Roadway reconfiguration for safety, efficiency and livability improvements along US 6 through central Huron	2045-2050	$ 2,956,787.64
39	City of Huron	ERI US 0006 16.27 Phase 2	Pavement resurfacing and intersection improvements with revised intersection geometry and ADA improvements for walk/curb ramps	2025-2035	$ 1,798,585.05
40	City of Huron	US 6 Major Bridge Rehab	Major Bridge Rehabilitation over the Huron River	2025-2035	$ 44,907,000.00
41	Berlin Township	Resolve Alignment Issue: SR 61, SR 113 and Collins Road	Roadway Realignment for improved intersection conditions at W. Collins Road, SR 61 and SR 113	2035-2040	$ 750,000.00
42	Berlin Township	Access Management Planning Study SR 61	Safety improvements and access management planning for SR 61 Corridor	2045-2050	$ 750,000.00
43	Vermilion Township	US 6 Phase 2 Study - Safety Improvement Implementations	Safety Improvements along the corridor and extension of multimodal facilities between Huron and Vermilion	2035-2040	$ 3,507,526.76
44	Vermilion Township	SR 60 Road Preservation and Gateway Treatments	Speed Management and safety countermeasures as gateway treatments entering into Vermilion Township along SR 60	2035-2040	$ 1,330,111.95
45	Vermilion	W. River Road Preservation	Resurfacing of W. River Road from Linda Drive to Libery Ave/US 6	2025-2035	$ 1,250,915.49

Project Number	Location	Project Name	Project Description	Project Timeframe	Planning Level Cost*
46	Vermilion	Vermilion Road Preservation	Resurfacing of Vermilion Road from Jerusalem Road to North Ridge Road	2025-2035	$ 1,145,912.36
47	Vermilion	High Bridge Road Widening and Repaving	Major Roadway Rehab to accommodate larger traffic flows from Liberty Avenue to Vermilion Road	2025-2035	$ 2,142,467.63
48	Vermilion	Brownhelm Station Road Repaving and Interchange	Lane widening to ODOT standards and Interchange improvements from Brownhelm Station Road to Sunnyside Road	2035-2040	$ 3,111,156.77
49	Kelley's Island	Preservation of Kelley's Island Existing Network	Resurfacing of roadways and maintenance of existing pedestrian facilities	2035-2040	$ 3,000,000.00
50	Put-In-Bay Township	Preservation of Bass Island Existing Network	Resurfacing of roadways and maintenance of existing pedestrian facilities	2035-2040	$ 3,000,000.00
51	Village of Put-In-Bay	Preservation of Put-In-Bay Village Existing Network	Resurfacing of roadways and maintenance of existing pedestrian facilities	2035-2040	$ 3,000,000.00
52	Erie Township	Resolve Alignment Issue - W. Harbor Road and W. Three Mile Crossing Road	Safety Countermeasures and roadway realignment for at grade crossing and stop-controlled intersection	2040-2045	$ 750,000.00
53	Erie Township	Intersection Improvements - SR 2 and W. Lakeshore Drive	Safety Improvements at the terminus of W. Lakeshore Drive at SR 2	2035-2040	$ 3,000,000.00
54	Bay Township	Intersection Improvement - Dual Roundabouts at US 2 and SR 53	Safe Street 4 All Implementation of dual roundabouts at SR 2 and SR 53 Interchange	2025-2035	$ 4,500,000.00

Project Number	Location	Project Name	Project Description	Project Timeframe	Planning Level Cost*
55	Bay Township	W. Fremont Road Preservation and Gateway Treatments	Speed management and safety countermeasures along W. Fremont Road/SR 53 between US 2 and McKinley Drive	2035-2040	$ 1,463,596.04
56	Port Clinton	Intersection Improvement - Perry St and Monroe St	Roadway reconstruction and improved pedestrian safety crossings at W. Lakeshore Drive and W. Perry Street 5 way intersection	2025-2035	$ 2,817,800.00
57	Port Clinton	Fulton Street Preservation and Safety Improvements	Resurfacing and pedesitran improvements along Fulton Street from US 2 to Perry Street	2035-2040	$ 1,863,735.07
58	Port Clinton	Perry Street Widening and Rehabiltation	Resurfacing Perry Street with multimodal facilities and recommended lane widths	2035-2040	$ 4,760,925.42
59	Danbury Township	Intersection Improvements - E. Harbor Road and SE Catawba Road	Safety Improvements and congestion management	2035-2040	$ 4,500,000.00
60	Danbury Township	Intersection Improvements - E. Harbor Road and S Bridge Road	Safety Improvements and congestion management	2040-2045	$ 4,500,000.00
61	Danbury Township	Church Road and E. Bayshore Road Resolve Alignment Issues	Convert three leg stop-controlled intersection into single-lane roundabout	2035-2040	$ 3,000,000.00
62	Danbury Township	Intersection Improvements - Church Road and E. Harbor Road	Convert three leg stop-controlled intersection into single-lane roundabout	2035-2040	$ 4,000,000.00
63	Danbury Township	E. Bayshore Road Resurfacing	Repaving of E. Bayshore Road from E. Port Clinton Road to S. Hartshorn Drive	2025-2035	$ 2,487,030.00

Project Number	Location	Project Name	Project Description	Project Timeframe	Planning Level Cost*
64	Catawba Township	Miller Ferry - Ferry Loading, Roadway, and Pedestrian Safety Improvements	Redesign of Miller's Landing Ferry site to accommodate intermodal travel and support local island services	2040-2045	$ 10,000,000.00
*Cost estimates were identified through ERPC MPO TIP when available					

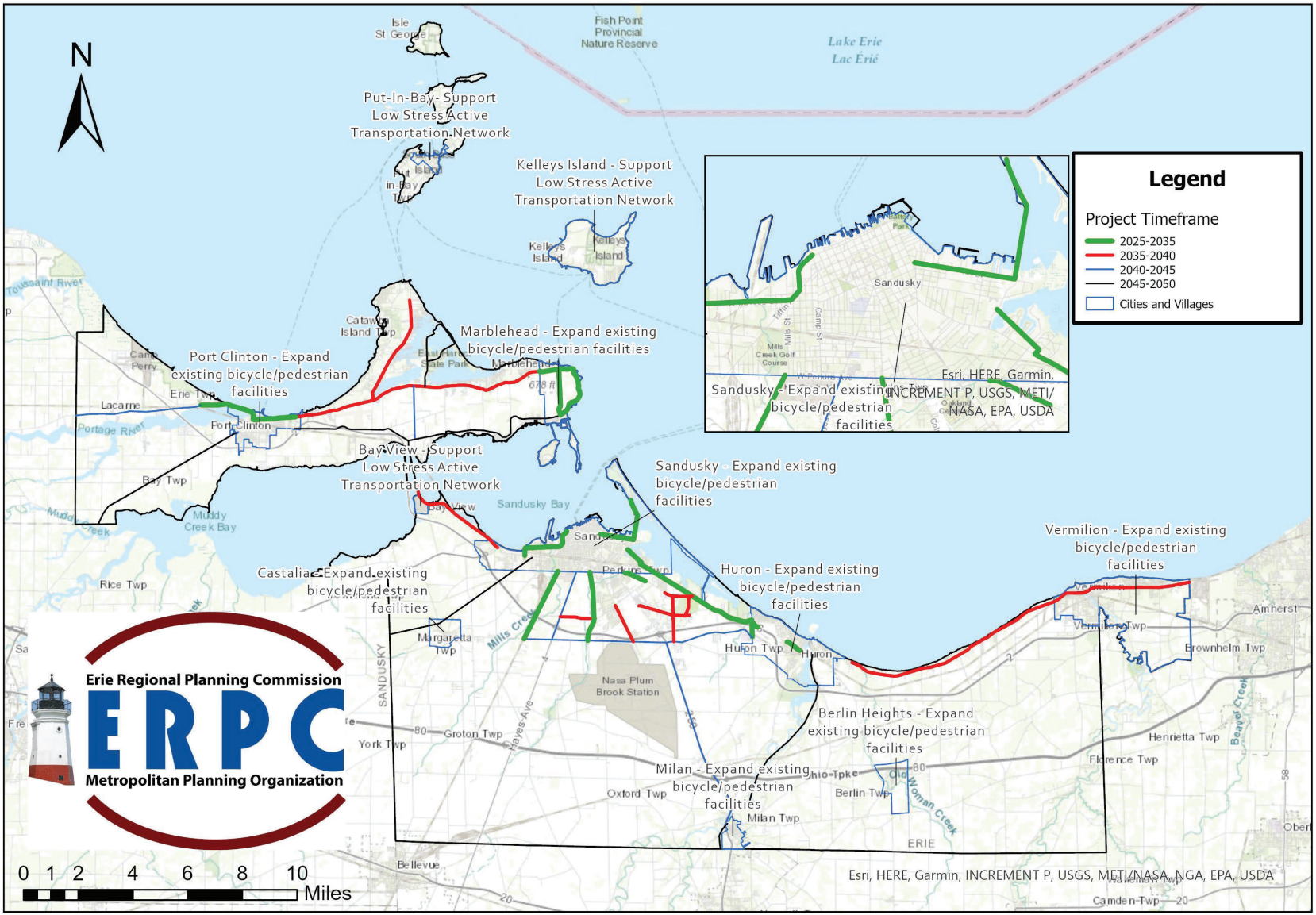

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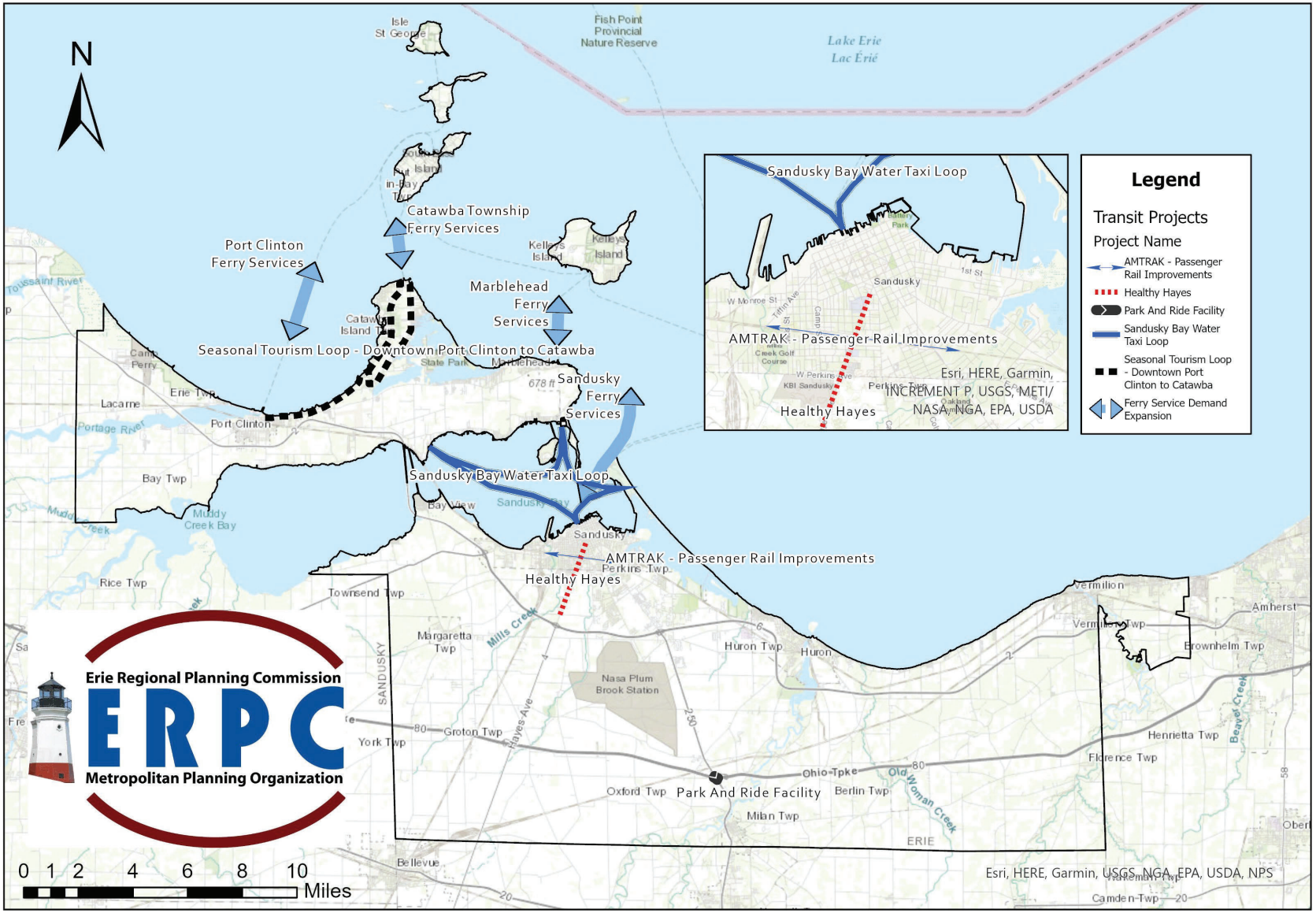
Figure 9-4.3: Recommended Non-Motorized Projects

ERPC MPO 2050 Long Range Transportation Plan

Table 9-4.3 Non-Motorized Projects

Project Number	Location	Project Description	Project Timeframe	Planning Level Cost
65	Perkins Township	SR 4 Sidepath	2040-2045	$ 1,741,005
66	Perkins Township	Campbell Street Sidewalks	2025-2035	$ 1,682,528
67	Huron Township	Galloway Road Multimodal	2035-2040	$ 305,507
68	Huron Township	Perkins Avenue Multimodal	2035-2040	$ 596,905
69	Perkins Township	Perkins Avnue Sidewalks	2025-2035	$ 522,005
70	Perkins Township	Bogart Road Sidepath	2040-2045	$ 3,606,054
71	Huron Township	Bogart Road Sidepath	2040-2045	$ 2,022,473
72	Milan Township	US 250 Sidepath	2040-2045	$ 4,671,301
73	Perkins Township	Strub Road Multimodal	2035-2040	$ 848,835
74	Perkins Township	Hull Road Multimodal	2035-2040	$ 1,248,185
75	Huron Township	Osborn Metropark Connector	2035-2040	$ 573,927
76	Perkins Township	Old Railroad Multimodal	2040-2045	$ 1,822,825
77	Perkins Township	Columbus Avenue Multimodal	2035-2040	$ 977,085
78	Danbury Township	Peninsula Trail	2025-2035	$ 2,203,883
79	Danbury Township	S. Bridge Road Connector	2040-2045	$ 1,286,843
80	Danbury Township	East Harbor Loop	2045-2050	$ 3,135,988
81	Catawba Township	Islander Trail	2035-2040	$ 2,693,312
82	Marblehead	S. Alexander Pike Connector	2025-2035	$ 1,125,927
83	Danbury Township	Peninsula Trail	2045-2050	$ 4,217,703
84	Danbury Township	Peninsula Trail	2035-2040	$ 6,126,726
85	Milan Township	Huron River Towpath - Norwalk to Milan	2045-2050	$ 171,049
86	Huron Township	Huron River Towpath - Milan to Huron	2045-2050	$ 1,082,592
87	Port Clinton	W. Lakeshore Drive Shoring and Sidepath	2025-2035	$ 1,581,011
88	Port Clinton	E. Perry Street Waterworks Route	2025-2035	$ 896,421
89	Erie Township	Portage River Trail - Oak Harbor to Port Clinton	2040-2045	$ 3,027,563
90	Berlin Township	Sandusky Bay Pathway - Huron to Vermilion	2025-2035	$ 5,765,488
91	Sandusky	Cedar Point Causeway	2025-2035	$ 992,112

Project Number	Location	Project Description	Project Timeframe	Planning Level Cost
92	Sandusky	Sandusky Bay Pathway - 1st Street Extension	2025-2035	*Cost Covered in Preservation Project
93	Bay Township	Sandusky Bay Pathway - Port Clinton to Fremont	2045-2050	$ 4,034,032
94	Huron	Sandusky Bay Pathway - Huron	2025-2035	$ 368,605
95	Huron	Sandusky Bay Pathway - Huron Connection	2025-2035	$ 178,383
96	Vermilion	Sandusky Bay Pathway - Vermilion	2035-2040	$ 825,896
97	Huron Township	Sandusky Bay Pathway - US 6 Connectivity Corridor	2025-2035	*Cost Covered in Expansion Project
98	Bay View	Sandusky Bay Pathway - Bay View to Sandusky	2035-2040	$ 2,615,798
99	Port Clinton	Sandusky Bay Pathway - Port Clinton to Bay View	2045-2050	$ 20,739,408
100	Sandusky	Sandusky Bay Pathway - Venice Road to downtown	2025-2035	$ 1,442,074
101	Margaretta Township	Sandusky Bay Pathway - Sandusky to Fremont	2045-2050	$ 999,276



Map prepared by Erie Regional Planning Commission, and is intended for illustrative purposes only. Erie County, Ohio assumes no responsibility or liabilities for any errors or omissions contained here in.

Figure 9-4.4: Recommended Transit Projects

ERPC MPO 2050 Long Range Transportation Plan

Table 9-4.4 Transit Projects

Project Number	Location	Project Description	Project Timeframe	Planning Level Cost*
102	Sandusky	Healthy Hayes	2035-2040	$ 200,000.00
103	Sandusky/Danbury Township	Sandusky Bay Water Taxi Loop	2045-2050	$ 800,000.00
104	Sandusky	AMTRAK - Passenger Rail Improvements	2035-2040	$ 100,000.00
105	Milan	Park And Ride Facility	2045-2050	$ 50,000.00
106	Port Clinton to Catawba Township	Seasonal Tourism Loop - Downtown Port Clinton to Catawba	2045-2050	$ 800,000.00

9.5 Freight & Regional Transportation Modes

Continued investment in the rail and airport facilities is necessary to maintain and enhance the region's position as a hub for freight and passengers. Intermodal facilities benefit the MPO area by supporting economic development throughout the MPO area across all modes of transportation.

Overall policies include:

- Integrate land use and freight transportation planning process
- Foster strategic partnerships and alliance for public-private regional freight collaboration
- Invest in and promote region's multimodal and intermodal capabilities
- Improve freight mobility, safety and operations
- Expand regional freight planning capabilities
- Increase freight awareness among all stakeholders

The railroads that serve the MPO are owned and operated by private freight entities; therefore, no designated funding is available for government or improvement of these facilities, beyond adopting policies to ensure the safety and maintenance of the network, especially the smaller class lines. In addition, these facilities and their operations are typically regulated through the Federal Railroad Administration.

Railroad freight services are directly correlated with the economic vitality of the businesses and the communities that they serve. Therefore, ODOT has implemented the following statewide objectives for its management of the railroad network in the Statewide Long-Range Transportation Plan: ODOT will coordinate with the major carriers, such as Norfolk Southern on all track abandonment to preserve the right-of-way for future work and to minimize any adverse impacts on the communities affected by abandonment. ODOT will work with the small railroad companies to support their efforts to maintain appropriate conditions of their infrastructure, including enhancement of their access to the major carrier lines. ODOT will continue its railroad grade-crossing improvement program to minimize the conflicts between railroad operations and people and property and ensure a safe and efficient railroad system.

Because of the expense of roadway freight shipping, private companies continue to seek new ways to haul more raw goods and materials via rail service. This expansion of rail service does not necessarily equate to infrastructure expansion but improving the operations by either "double-stacking" the cargo containers or other efficiencies. While there are some significant projects taking place statewide, no railroad infrastructure expansions in the operations are expected in the ERPC MPO region in the near future.

9.6 Funding and Costs

This section summarizes the financial analysis of potential transportation investments. Estimated revenue from existing and proposed funding sources is compared with estimated project costs of constructing and maintains the transportation system to the year 2050. Prior to ISTEA and TEA-21, LRTP's often contained "wish lists" of projects that had very little chance of being constructed. The planning

regulations of ISTEA and TEA-21 brought about a change that required MPOs to consider the financial implications of their planning efforts. To this end, the federal planning regulations put in place the requirement for financial constraint of these documents. In 23 CFR 322 (b)(11), it is stated that transportation plans shall: *"Include a financial plan that demonstrates the consistence of proposed transportation investments with already available and projected sources of revenue The financial plan shall compare the estimated revenue from existing and proposed funding sources that can reasonably be expected to be available for transportation uses, and the estimated costs of constructing, maintaining and operating the total (existing plus planned) transportation system over the period of the plan. The estimated revenue by existing revenue source (local, State Federal, or private) available for transportation projects shall be determined and any shortfalls identified. Proposed new revenues and/or revenue sources to cover shortfalls shall be identified, including strategies for ensuring their availability for proposed investments. Existing and proposed revenues shall cover all forecasted capital, operating, and maintenance costs. All cost and revenue projections shall be based on the data reflecting the existing situation and historical trends."*

Funding for the ERPC MPO's transportation maintenance and improvement projects comes from a variety of Federal, State, local and private sources. The federal government is the primary source of funding for transportation systems in the United States. These funds come from federally assessed user fees, fuel taxes, and landing fees. They are apportioned back to the states on a formula basis. The primary source of revenue at the Federal and State levels includes motor fuel taxes, vehicle registration fees, special motor carrier fees, parking fees and toll fees. Finance at the county and municipal levels are primarily based on property taxes, sales taxes, and special assessments. The private sector, such as developers and business associations, often support transportation projects through impact fees, right-of-way donations, and cost sharing.

Federal, State, local agencies and private developers have invested hundreds of millions of dollars in the region's transportation system over the past several decades. In the late 1990's, programs such as TEA-21 significantly increased Federal and State funding authorizations above previous levels. However, the cost of maintaining the existing transportation infrastructure is continually increasing as the facilities age. The challenge that the MPO faces in the future is to balance the maintenance of the existing transportation infrastructure while at the same time identifying adequate funding for the construction of new transportation facilities.

Roadway improvement costs were identified using the current Transportation Improvement Plan (TIP) (**Fiscal Year 2026 to Fiscal Year 2029**) and programmed project funding. For those projects not included in the TIP, general planning level construction costs were developed using general cost estimates provided by local and state agencies. It is important to consider the following when reviewing the project cost estimates. First, because it is difficult to identify a specific year that each project might be constructed, all estimated costs are presented in 2025 dollars. Second, since specific details regarding design, engineering, and construction are often not available, the estimated costs represent a very general planning level cost estimate. As projects proceed to the detailed planning and engineering phases, resulting in more accurate estimates, the project cost estimates contained in this LRTP should be updated. Based on the identified projects and estimated costs, it is projected that the roadway improvement projects would total approximately **$339.7 million in year 2025 dollars**.

Projected Revenues: The projected funding levels provide a general comparison between the estimated roadway improvement costs and estimated funding levels. It should be noted that the estimated maintenance costs and funding sourced are **tabulated in year 2025 dollars** to provide a consistent comparison to the estimated roadway improvements, which are also presented in year 2025 dollars. A significant percentage of funding over the next twenty-five years will be dedicated to the preservation of the existing transportation infrastructure. This includes the routine maintenance and repair of bridges, pavement, traffic signals and traffic signs, and overall funding will go to projects outside of long range plan. Based upon the assumptions, the estimated preservation costs for the next twenty-five years total approximately **$171.3 million in year 2025** dollars as shown in **Table 9-4.2**. The estimated funding sources over the next twenty-five years are approximately **$461.7 million in year 2025** dollars, including transit and active transportation improvements. Under this funding scenario, there would be approximately **$290.4 million** available for the implementation/construction of the transportation improvement projects identified in **Table 9-4.1,** which total just under **$168.4 million**.

Federal Funding Sources: While the percent of federal funding for a project varies by category, the Federal government typically provides 80 percent of the funding, with 20 percent of the funding matched by ODOT or a local agency. Of the federal funding programs identified in the Infrastructure Investment and Jobs Act (IIJA), the MPO has direct access to three. Although congress assigns Surface Transportation Block Grant Program (STBG) funding to each MPO, ODOT sub-allocates a portion of the STBG, TA and CRP funding assigned to Ohio. Funding for all other categories is determined by ODOT (through a statewide ranking process), by the Federal government, or is not applicable to the MPO. The categories that the ERPC MPO has direct input and/or selection responsibility include the following.

> **Surface Transportation Block Grant Program (STBG)**: This category is for transportation needs with urbanized areas with populations less than 200,000 and greater than 50,000. Funding is 80 percent Federal and 20 percent State and Local. Census population allocates funds and projects are selected by the MPO and ODOT.
>
> **Transportation Alternative (TA) Program:** Ten percent of STBG funding is available for this category. Enhancements include bike and pedestrian facilities, preservation of historic site, scenic beautification and other transportation related projects. The MPO must submit a letter stating their support of the project, identifying funding, and attesting that the project is consistent with long-range transportation plans.
>
> **Carbon Reduction Program (CRP):** New from IIJA in 2022, CRP funds are made available to the MPO's for the purpose of providing funds on projects that reduce transportation emissions. Enhancements can include traffic monitoring and management, public transportation projects, and transportation alternative projects. Typically, ERPC MPO rolls CRP funds into the TA funds solicitation in order to grow the overall funding available for the projects.

Additional Funding: Additional funding is available through the U.S. Department of Transportation (USDOT) discretionary funding categories where USDOT solicits for applicants and selects projects based on a set of selection criteria. Within the short term expansion projects is the US 6 Connectivity Corridor,

receiving a Better Utilizing Investments to Leverage Development (BUILD) Grant in the amount of $24.5 million.

State Funding Sources: State funding is administered by ODOT. Among the most common forms of funding are the following:

- **Motor Vehicle and Gas Tax (MVGT):** This tax is collected on each gallon of gas that is purchased. The State of Ohio levies a tax of 38.5 cents per gallon of gasoline. The tax is included in the selling price, so the user of the motor fuel ultimately pays the tax. The tax is collected by the Department of Taxation and distributed to local governments. To qualify for funding, municipalities must be incorporated. Municipalities receive their funding based on population. Counties receive their allotment based on total license fees in the county.

- **Surface Transportation Block Grant Program (STBG):** The STBG is administered by the State of Ohio for the MPO. STBG money is sub-allotted to each MPO for use on many transportation projects. Ten percent of all STBG funds must be used for safety projects. These funds can be used for rail crossing improvements, signals, and other accident-reducing methods of transportation improvement.

- **Economic Development Funds:** Economic Development funds may be used for transportation projects if the new or improved facility will attract or create jobs. This program can be used for industrial, commercial and recreational projects if the project is necessary.

- **Highway Bridge Replacement and Rehabilitation Program (HBRRP)**: HBRRP Funds are provided to replace or rehabilitate structurally deficient bridges on or off the system for the safe and expeditious transportation of the general public. The funds are allotted to districts based on a formula involving square footage of eligible bridges. Ohio distributes BR funds through the Municipal Bridge, Major Bridge, County Bridge, and Ohio Bridge Partnership programs.

- **Ferry Boat Program (FBP):** FHWA makes available formula funding to ODOT for the Ferry Boat Program for designing and constructing ferry boats and for designing, acquiring right-of-way, constructing ferry terminal facilities and other eligible activities. Currently, Put-in-Bay Boatline Company (AKA Jet express) is the only eligible entity in Ohio and have previously used the funds.

Local Funding Sources: The basis of local funding of transportation projects in the local municipalities and counties is primarily through Federal and State allocations and block grants. Additional revenues come from property taxes, sales taxes, special assessments, and special tax districts. General funds for the roadway maintenance may be obligated from the general property tax proceeds for transportation purposes. While this represents a funding source, the trend in local government is to use general fund

property tax proceeds for operation and maintenance of general government. Additional funding includes:

- **Bonds:** Transportation projects may be financed utilizing bonded indebtedness. This method allows a unit of government to raise capital through the sale of public bonds to be repaid with interest by either general property tax receipts, motor fuel tax, or revenue from the project upon completion.

- **Tax Increment Financing (TIF):** The TIF technique captures all increases in property tax resulting from improvements to a property until such time as allowable project expenses have been paid. Proposed improvements and planned expenditures are defined in a plan and must meet eligibility requirements under the enabling legislation. City government defines district and program in consultation with unites of local government impacted by the proposed district.

- **Capital Improvement Program (CIP):** Funding for near-term (one to five years) transportation projects are identified in the State's multi-year program also known as Issue 2, municipalities' Capital Improvement Program (CIP) and both Erie County and Ottawa County's CIP. Estimates of near-term transportation funding are based on appropriated levels of federal funding, cash flows of state funding sources, and city and county bonding programs and general revenue sources.

Private Sector Funding Sources: As a community grows, vacant land or farmland is often converted to urban uses. As part of that growth, land developers may pay the cost of infrastructure development including streets. Particularly as it relates to commercial development and industrial development, developers may potentially pay a large share of arterial and collector street widening, enhancement, or rehabilitation. The continued enforcement and management of growth through subdivision code administration minimizes the cost to the community. When developing major roadways, units of local government may negotiate with private interests to share in the development costs of arterial or collector streets that provide direct benefit to private interests. The amount of money available using this technique is limited only by the degree of commitment from the private sector and the willingness of the private sector to share in those costs. Impact or entertainment fees are costs assigned to new development of the maintenance of existing facilities. Developers pay these fees with costs generally passed on to the eventual owners of the property.

Funding/Implementation: As part of metropolitan planning organization regulations, the recommended long range transportation plan must be financially constrained. The capital cost estimate in dollars for each transportation improvement and the schedule for implementation of those projects are summarized in **Tables 9-4.1** through **9-4.4,** with additional analysis in the appendix**.** Overall, the amount of dollars that will be available to fund the planning, design, and construction of the recommended transportation plan projects can be divided into two types of funds: Roadway/Non-Motorized project improvement funds and Transit project improvement funds.

Roadway/Non-Motorized project Improvement Funding: Several types of funding are available including:

- **MPO funds**: Surface Transportation Block Grant (STBG), Transportation Alternative (TA), and Carbon Reduction Program (CRP) are available

- **Other Funds:** Transportation Review Advisory Council (TRAC), ODOT District 2 and District 3, County CSTP, County Bridge, City Bridge, and Safety

Based on the available information for existing and future funding of transportation projects the following dollars will be available:

- In the **Year 2026, $18,014,689** is potentially available for roadway/non-motorized improvements
- In the **Year 2050, $19,151,949** is potentially available for roadway/non-motorized improvements

Transit Project Improvement Funding: Funding for transit project improvements are available through the Federal Transit Agency and are distributed by the Ohio Department of Transportation (operating costs excluded):

- In the **Year 2026, $414,358** is available for transit maintenance costs.
- In the **Year 2050**, the current amount is forecasted to increase by 2% per year to **$673,002.**

10. Plan Implementation and Conclusions

10.1 Overview

Congestion and Safety concerns along key north south and corridors within the MPO, as well as east-west connectivity issues, prompted the analysis of number of roadway improvement alternatives and four-time scenarios. After a comprehensive analysis, the following improvements were identified as the most effective elements to address the MPO's transportation deficiencies, while operating within existing and future funding constraints.

The following types of system improvements categorize the roadway alternatives:

- **Expansion**: This category of improvement includes the construction of new corridors, the addition of through-traffic lanes to existing facilities, and addition of a new interchange or bridge.

- **Preservation:** This category includes resurfacing minor widenings, spot intersection improvements, signal/intersection traffic control modifications and the use of Intelligent Transportation System (ITS) technology.

Traditionally, the region has focused on roadway expansion and preservation projects to improve travel conditions for local residents, with less attention paid to improving pedestrians, bicyclists, and transit mobility. As the MPO continues to attract tourism, businesses and residents, it becomes essential to plan for a more comprehensive transportation system that serves the needs of travelers using all modes of transportation. An aging population and growing tourist industry intensify the need for expanding current transit services.

It should be noted on March 15, 2010, the USDOT announced a policy statement on Bicycle and Pedestrian Accommodation Regulations and Recommendations to reflect the Department's support for the development of fully integrated active transportation networks. The policy statement indicates that the establishment of well-connected walking and bicycling networks is an important component for livable communities and their design should be part of Federal-aid project developments. In support of this commitment, transportation agencies and local communities should go beyond minimum design standards and requirements to create safe, attractive, sustainable, accessible and convenient bicycling and walking networks.

The following types of system improvements categorize the transit alternatives:

- **Operations Improvement:** This category of improvement includes taking action on the strategies and goals listed in the Coordinated Transportation Plan Update. Examples include supporting coordination between transit providers and local entities as well as encouraging improvements to the current system when feasible.

- **Route Expansion:** This category includes expanding service countywide and offering demand response service; as well as developing a corridor level fixed-route transit service along the Hayes Avenue corridor in Sandusky.

As the demand for safe recreational opportunities increases, a larger investment in connecting existing parks and bikeways and adopting policies to provide for non-motorized travel along roadways becomes more important. The following types of system improvements categorize the non-motorized alternatives:

- **Trail Expansion:** This category of improvement includes connecting existing trails within the county as well as to adjacent counties.

- **Roadway Design:** This category includes developing a bicycle/pedestrian system along existing and proposed local/collector roadways and encouraging the "Complete Streets" concepts where feasible.

10.2 Recommended Transportation System Improvements

The purpose of the long-range transportation planning process is to identify a system-wide strategy for addressing regional needs that:

- Meet the local transportation goals and objectives.
- Support the mobility desires of the region.
- Can be funded over the 25-year planning period

Documented in the following sections are summaries of how each of these elements was addressed through the planning process.

1. Meeting the Transportation Plan's Goals and Objectives

Assessment of the consequences of alternative transportation system options is needed to efficiently administer funding appropriately. At the same time the alternatives must reflect the goals and objectives that have been established for the long-range transportation plan which were developed in alignment with the transportation priorities of ODOT's long-range plan, Access Ohio 2050. These goals and objectives are used to develop performance measures that were used to evaluate projects to be included in the plan.

2. Support Local Mobility Need

Parallel with the alternatives review and system plan development, travel patterns within the study area were assessed using the statewide travel demand model results and an examination of existing transportation conditions. If an improvement concept does not support current and forecasted travel needs/desires in the region, it should not be included in the recommended plan. All *recommended* plan elements meet the criteria of complementing existing or future travel patterns.

3. Financial Feasibility

Federal legislation (23 CFR 450.324) requires that MPOs are responsible for preparing a fiscally constraint long-range transportation plan.

"…a financial plan that demonstrates how the long-range transportation plan can be implemented, indicates the resources from public and private sources that are reasonably expected to be made available

to carry out the plan, and recommends additional financing strategies for needed projects and programs. The financial plan may include, for illustrative purposes, additional projects that would be included in the adopted long-range transportation plan if reasonable additional resources beyond those identified in the financial plan were to become available. For the purpose of developing the long-range transportation plan, the MPO, the State, and public transit operators shall cooperatively develop estimates of funds that will be available to support plan implementation."

Roadway, transit and non-motorized improvements were slated for implementation in one of four categories (short-term, mid-term, mid/long-term, and long-term) and assessed for financial constraint.

There are 54 roadway preservation projects that are projected to have a total cost that equals $171,264,414. These are broken out into the following time periods:

- Short-term (within 10 years) = $89,876,049
- Mid-term (10 to 15 years) = $43,087,634
- Mid/Long-term (15 to 20 Years) = $25,955,096
- Long-term (25+ years) = $12,345,633

There are 10 expansion projects with an estimated total cost that equals $168,427,695.

- Short-term (within 10 years) = $69,059,199
- Mid-term (10 to 15 years) = $16,389,272
- Mid/Long-term (15 to 20 years) = $35,311,550
- Long-term (25+ years) = $47,667,672

Several types of funding are available for the roadway improvement elements of the plan including:

- MPO Funds
- Surface Transportation Block Grant (STBG)
- Congestion Mitigation Air Quality (CMAQ)*
- Transportation Alternative Program (TAP)
- Carbon Reduction Program
- Transportation Review Advisory Council (TRAC), ODOT District 3, County STP, County Bridge, City Bridge, and Safety
- Other funds

*Currently not available in MPO is an air quality attainment area

The total amount of forecasted potential funds is $437,233,665 for the next 25 years (or about $17.4 million per year that could be available for this 25-year plan.) While there are minor fiscal shortfalls in the short term of $13.1 million, it should be noted ERPC received a Federal RAISE Grant for $24.5 million for the programmed US 6 Connectivity Corridor project that was not included in the future financial forecast based on being a competitive grant. Future projects maintain fiscal constraint and the total project costs remain under the $437 million for the next 25 years.

There are 36 non-motorized projects identified in this plan as regional connections that may be funded through available roadway improvement monies. These projects can also compete for various ODNR and federal funds (not figured into available funding in this plan). Additionally, these projects would be paired with relevant roadway improvement projects to help lower overall project costs.

The total cost equals $83,903,737 and are broken out into the following time periods:

- Short-term (0-10 years) = $9,867,022
- Mid-term (10-15 years) = $23,703,591
- Mid/Long-term (15 -20 years) = $18,178,064
- Long-term (25+ years) = $32,155,059

Approximately $13.4 million is available for funding of transit projects, including the following:

- Support the long term operations and maintenance of Sandusky Transit Systems and help establish long term funding sources
- Support the long term operations and maintenance of existing ferry routes provide connections to the Lake Erie Islands

Intermodal Transfer Facilities (2 projects)

- Development of an Milan to Cleveland Park and Ride Facility to help coordinate I-80 travel ($50,000)
- AMTRAK Passenger Rail Improvements at the Sandusky Station to accommodate increased passenger rail lines to Toledo, Cleveland, Detroit, Buffalo and beyond. ($100,000)

Fixed Route Service Projects (3 project)

- Develop a corridor level fixed-route transit service along Hayes Avenue (workforce healthcare line - $200,000).
- Develop a Water Taxi Fleet Program through Sandusky Bay ($800,000).
- Develop a seasonal Tourism Loop from Downtown Port Clinton to Catawba Township connecting jobs and restaurants ($800,000)

Mobility Coordination (2 items)

- Work with local transportation/transit stakeholders to continue to secure funding for a transit mobility manager. This would assist in finding ways to improve transit coverage and also to improve duplication of services that will reduce transportation costs.
- Participate in 3-year updates of the Coordinated Transportation Plan.

Expenditures for *recommended* roadway, transit and non-motorized projects satisfy financial constraints as shown in **Table 10-1** located in Appendix A.

4. Adoption of the Recommended Long-Range Plan

The ERPC Policy Committee adopted the Recommended Long-Range Plan in July 2025; the implementation of the LRTP is set in motion through a series of three-year Transportation Improvement Program (TIP). The TIP lists the actual projects to be implemented and how they will be financed. The projects that are programmed in the TIP are the result of the objectives and policies identified in the Long-Range Transportation Plan and align with the transportation priorities outlined in ODOT's Access Ohio 2050 long-range plan. The ERPC MPO Long-Range Transportation Plan is required to be updated every five years.

Table 10-2 displays the action items that will take place in the implementation of the ERPC MPO Long-Range Transportation Plan. Each action item has a priority in order to insure a logical and reasonable implementation schedule for the transportation plan. These action items will be reviewed annually to ensure that plan goals and objectives are being realized and maintained. Further, the recommended transportation improvement projects listed in Chapter 9 will be moved forward through the planning, design and construction stages as the ERPC MPO implements this adopted Long-Range Transportation Plan.

Table 10-2: Implementation Program for the Erie County Long Range Transportation Plan

Priority	Action	Lead and Coordinating Agencies
1	Plan Adoption: ERPC will formally adopt the ERPC MPO 2050 Long Range Transportation Plan as its guiding document for development and improvement of its transportation system.	Ottawa County Planning, Erie County Planning, Cities, Villages, and Townships within Erie County and Ottawa County, Ohio Department of Transportation (ODOT)
1	Land Use Plan: Implement the past, current, and future land use plan recommendations and coordinate land use and transportation decisions within zoning code to include: 1.) Compact mixed and contiguous land use patterns. 2.) New neighborhoods designed with grid pattern with sidewalks and street trees. 3.) Promote infill and reinvestment in underutilized areas. 4.) Activity centers should provide for bicycle, pedestrian and transit access.	ERPC MPO, Ottawa County Planning, Erie County Planning, Cities, Villages, and Townships within the MPO, Ottawa County Engineer's Office, Erie County Engineer's Office
1	Access Management: Continue to support implementation of access management plans for principal and minor arterial corridors.	ERPC MPO, Erie County Planning, Cities and Villages within the MPO, ODOT, Erie County Engineer's Office, Ottawa County Engineer's Office
1	Encourage recommended road widths based on ODOT Design Guidelines: ERPC MPO should ensure area roadways are meeting recommended widths based on functional class and location of area roadways according to ODOT recommended widths. Likewise, the ERPC MPO should consider converting undivided roadways to divided highway configurations as detailed in the recommended transportation plan.	ERPC MPO, Erie County Planning, Ottawa County Planning, Cities, Villages, and Townships within ERPC MPO, ODOT, Erie County Engineer's Office, Ottawa County Engineer's Office
1	Intersection Improvements: Implement intersection safety and engineering improvements listed in Chapter 9 under Recommended Transportation Improvements.	ERPC MPO, Ottawa County, Erie County Planning, Cities, Villages, and Townships within the MPO, ODOT, Ottawa County Engineer's Office, Erie County Engineer's Office
1	Parkways and trail system: Adopt and develop a trail system and a parkway guideline	ERPC MPO, Ottawa County Planning, Erie County Planning, Ottawa County Parks District, Erie County MetroParks, Cities, Villages, and Townships within the MPO, Ottawa County Engineer's Office, Erie County Engineer's Office
1	Local Street Design: New local streets should provide for traffic movement while ensuring a safe, attractive, and pedestrian and bicycle friendly neighborhood environments.	ERPC MPO, Ottawa County Planning, Erie County Planning, Cities, Villages, and Townships within the MPO, Erie County Engineer's Office, Ottawa County Engineer's Office
1	Sidewalks: Require sidewalks or other pedestrian corridors in all new developments. Require pedestrian connections to greenway trails and other significant open space. Sidewalk connections and crosswalks at major intersections should be completed in coordination with new development. Sidewalks should have a minimum width of five feet in residential areas and wider (e.g. six to 12 feet) in commercial areas.	ERPC MPO, Ottawa County Planning, Erie County Planning, Cities, Villages, and Townships within the MPO, Ottawa County Engineer's Office, Erie County Engineer's Office, ODOT

Priority	Action	Lead and Coordinating Agencies
1	Sidewalk System Inventory: Maintain database that and prioritizes sidewalk and pedestrian needs (e.g. pedestrian ramps, crosswalks, etc.).	ERPC MPO, Erie County Planning, Ottawa County Planning Cities, Villages, and Townships within ERPC MPO, Erie County Engineer's Office, Ottawa County Engineer's Office, ODOT
1	Erie and Ottawa County Transit Coordinated Transit Plans: participate in three-year updates of existing Coordinated Transit Plan to coordinate the provision of future transit services with the ERPC MPO Long Range Transportation Plan recommendations.	ERPC MPO, Erie County Planning, Ottawa County Planning Cities, Villages, and Townships within Erie County, Federal Transit Administration, ODOT, STS, OCTA, GLCAP
1	Non-Motorized Plan Implementation: Implement the ERPC MPO Long-Range Transportation Plan non-motorized system recommendations.	ERPC MPO, Erie County Planning, Ottawa county Planning, Erie County Metroparks, Ottawa County Parks District, Cities, Villages, and Townships within ERPC MPO, ODOT
1	Traffic Calming: Utilize appropriate traffic calming strategies on local streets and other streets where deemed appropriate and institute a citizen-initiated traffic calming program.	ERPC MPO, Erie County Planning, Ottawa County Planning, Cities, Villages, and Townships within ERPC MPO, Erie County Engineer's Office, Ottawa County Engineer's Office, ODOT
1	Walkway Maintenance and Snow Removal: Pedestrian walkways need to be maintained for year-round use. Erie County and Ottawa County should develop and enforce sidewalk snow removal and maintenance ordinances and budget for the maintenance and snow removal of sidewalks under their jurisdiction.	ERPC MPO, Erie County Planning, Ottawa County Planning, Cities, Villages, and Townships within ERPC MPO, Erie County Engineer's Office, Ottawa County Engineer's Office
1	Off Road and On Road Bicycle Facilities: Include appropriate bike facilities as part of major roadway reconstruction. Bike racks and enclosed lockers should be encourages at schools, major employment areas and commercial destinations.	ERPC MPO, Erie County Planning, Ottawa County Planning, Erie County Metroparks, Ottawa County Parks District, Cities, Villages, and Townships within ERPC MPO, ODOT
2	Parking Management Plan: Develop and implement a parking management plan within ERPC MPO in cities, villages, and townships where parking is an issue and where parking issues worsen congestion on roadways especially in downtown areas.	ERPC MPO, Erie County Planning, Ottawa County Planning, Cities, Villages, and Townships within ERPC MPO
2	Waterfront property and ferry system: Support local port and ferry initiatives to relocate or reconfigure operations of companies located on the waterfront that are no longer active users of dock facilities as identified in the land use and economic development plans.	ERPC MPO, Erie County Planning, Ottawa County Planning Cities, Villages, and Townships within ERPC MPO, Greater Sandusky Partnership
2	Intelligent Transportation System (ITS): In conjunction with ERPC MPO, ODOT and the various cities, villages, and townships within the planning area continue to develop and implement an ITS plan.	ERPC MPO, Erie County Planning, Ottawa County Planning, Cities, Villages, and Townships within ERPC MPO, Erie County Engineer's Office, Ottawa County Engineer's Office, ODOT

Priority	Action	Lead and Coordinating Agencies
3	Maintain Passenger Rail Corridor: Ensure that the rail corridor right-of-way that provides access into the region remains intact.	ERPC MPO, Erie County Planning, Ottawa County Planning Cities, Villages, and Townships within ERPC MPO, AMTRAK
3	Intermodal Facilities: Work with trucking, rail, and port interests to investigate opportunities to enhance intermodal freight transportation.	ERPC MPO, Greater Sandusky Partnership, Erie County Planning, Ottawa County Planning, Cities, Villages, and Townships within ERPC MPO, Freight Stakeholders
3	Corridor Preservation: Support initiatives to preserve corridors within ERPC MPO for future transportation expansion plans.	ERPC MPO, Erie County Planning, Ottawa County Planning, Cities, Villages, and Townships within Erie County, Erie County Engineer's Office, Ottawa County Engineer’s Office, ODOT